STAFFORD Virginia

February 11, 2015

Ms. Alison Thompson
Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

Re : VPDES Permit No. VA0076392, Little Falls Run WWTP

Dear Ms. Thompson:

Enclosed is a reapplication for the referenced permit. The following forms as well as supplemental information are enclosed:

- General Form 1 – General Information
- NPDES Form 2A – Application For Permit to Discharge Municipal Waste From POTWs
- VPDES Sewage Sludge Permit Application Form
- Public Billing Information Form
- VPDES Permit Application Addendum

If you need additional information, please contact Janet L. Spencer, Deputy Director of Utilities at (540) 658-5120 or JSpencer@staffordcountyva.gov

Sincerely,

Michael T. Smith
Director of Utilities

MTS:jls
Enclosures

1300 Courthouse Road, P.O. Box 339, Stafford, VA 22555-0339 Phone: (540) 658.8600 Fax: (540) 658.7643 www.staffordcountyva.gov

Please print or type in the unshaded areas only. Form approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F			D

LABEL ITEMS

I. EPA I.D. NUMBER
III. FACILITY NAME
V. FACILITY MAILING ADDRESS
VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	X (16)	(17)	X (18)	B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)	(19)	X (20)	(21)
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	(22)	X (23)	(24)	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)	(25)	X (26)	(27)
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	(28)	X (29)	(30)	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	(31)	X (32)	(33)
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	(34)	X (35)	(36)	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	(37)	X (38)	(39)
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	(40)	X (41)	(42)	J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)	(43)	X (44)	(45)

III. NAME OF FACILITY

1 | SKIP | Little Falls Run Wastewater Treatment Facility VA0076392

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 Smith, Michael T.- Director of Utilities	(540) 658-8633

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 P.O Box 339

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Stafford	VA	22555

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 100 Michael Scott Lane

B. COUNTY NAME: Stafford County

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 Fredericksburg	VA	22405	

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
7 4952 *(specify)*	7 *(specify)*
C. THIRD	**D. FOURTH**
7 *(specify)*	7 *(specify)*

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
8 Stafford County Board of Supervisors	☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

M *(specify)*

D. PHONE *(area code & no.)*

A (540) 658-8607

E. STREET OR P.O. BOX

P.O. Box 339

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
B Stafford	VA	22555	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N VA0076392	9 P 73771
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U N/A	9 VAN020031 *(specify)* General Permit
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R N/A	9 N/A *(specify)*

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Facility receives and treats wastewater from domestic, commercial and light industrial sources.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
Anthony J. Romanello, ICMA-CM County Administrator		2.10.15

COMMENTS FOR OFFICIAL USE ONLY

C

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name: Little Falls Run Wastewater Treatment Facility

Mailing Address: P.O. Box 339
Stafford, VA 22555-0339

Contact person: Michael T. Smith

Title: Director of Utilities

Telephone number: (540) 658-8633

Facility Address (not P.O. Box): 100 Michael Scott Lane
Fredericksburg, VA 22405

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name: Board of Supervisors

Mailing Address: P. O. Box 339
Stafford, Virginia 22555-0339

Contact person: Anthony Romanello

Title: County Administrator

Telephone number: (540) 658-8605

Is the applicant the owner or operator (or both) of the treatment works?

✓ owner ✓ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

_____ facility ✓ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES VA 0076392
PSD _____
UIC _____
Other VAN020031
RCRA _____
Other Stationary Source Permit Registration #73771

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
Stafford County		Separate	municipal

Total population served _____

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

_____ Yes ✓ No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

_____ Yes ✓ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 8.0 mgd

	Two Years Ago	Last Year	This Year	
b. Annual average daily flow rate	2.961 (2012)	2.985 (2013)	3.141 (2014)	mgd
c. Maximum daily flow rate	6.982 (2012)	6.594 (2013)	11.654 (2014)	mgd

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

✓ Separate sanitary sewer	100 %
_____ Combined storm and sanitary sewer	_____ %

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? ✓ Yes _____ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent	1
ii. Discharges of untreated or partially treated effluent	n/a
iii. Combined sewer overflow points	n/a
iv. Constructed emergency overflows (prior to the headworks)	n/a
v. Other _____	n/a

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? _____ Yes ✓ No

If yes, provide the following for each surface impoundment:

Location: n/a

Annual average daily volume discharged to surface impoundment(s) n/a mgd

Is discharge _____ continuous or _____ intermittent?

c. Does the treatment works land-apply treated wastewater? _____ Yes ✓ No

If yes, provide the following for each land application site:

Location: n/a

Number of acres: n/a

Annual average daily volume applied to site: n/a Mgd

Is land application _____ continuous or _____ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? _____ Yes ✓ No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

n/a

If transport is by a party other than the applicant, provide:

Transporter name: n/a

Mailing Address: n/a

Contact person: n/a

Title: n/a

Telephone number:

For each treatment works that receives this discharge, provide the following:

Name: n/a

Mailing Address:

Contact person:

Title:

Telephone number:

If known, provide the NPDES permit number of the treatment works that receives this discharge. n/a

Provide the average daily flow rate from the treatment works into the receiving facility. n/a mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? ____ Yes ✓ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

n/a

Annual daily volume disposed of by this method: n/a

Is disposal through this method ____ continuous or ____ intermittent?

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a**, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number 001

b. Location

(City or town, if applicable)	(Zip Code)
Stafford County	Virginia
(County)	(State)
38° 15' 22"	77° 24' 45"
(Latitude)	(Longitude)

22405

c. Distance from shore (if applicable) 0 ft.

d. Depth below surface (if applicable) n/a ft.

e. Average daily flow rate _____ mgd

f. Does this outfall have either an intermittent or a periodic discharge? _____ Yes ✓ No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs: n/a

Average duration of each discharge: n/a

Average flow per discharge: n/a mgd

Months in which discharge occurs: n/a

g. Is outfall equipped with a diffuser? _____ Yes ✓ No

A.10. Description of Receiving Waters.

a. Name of receiving water Rappahannock River

b. Name of watershed (if known) Chesapeake Bay

United States Soil Conservation Service 14-digit watershed code (if known): _____

c. Name of State Management/River Basin (if known): Rappahannock River

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): 02080104

d. Critical low flow of receiving stream (if applicable):
acute n/a cfs chronic n/a cfs

e. Total hardness of receiving stream at critical low flow (if applicable): _____ mg/l of $CaCO_3$

A.11. Description of Treatment.

a. What levels of treatment are provided? Check all that apply.

_____ Primary ✓ Secondary

✓ Advanced _____ Other. Describe: _____

b. Indicate the following removal rates (as applicable):

Design BOD_5 removal or Design $CBOD_5$ removal	99.5	%
Design SS removal	98.8	%
Design P removal	86.7	%
Design N removal	90.0	%
Other _____	_____	%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Ultraviolet Lights

If disinfection is by chlorination, is dechlorination used for this outfall? _____ Yes _____ No

d. Does the treatment plant have post aeration? _____ Yes ✓ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.4	s.u.			
pH (Maximum)	8.2	s.u.			
Flow Rate	11.644	MGD	3.150	MGD	365
Temperature (Winter)	10 (Jan.14)	C	14	C	120
Temperature (Summer)	27 (July 12)	C	25	C	122

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.								
BIOCHEMICAL OXYGEN	BOD-5						SM 22nd ed.	
DEMAND (Report one)	CBOD-5	0.0	mg/L	0.0	mg/L	30	5210 B-2011	5.0
FECAL COLIFORM		2420	CFU/100ml	3	CFU/100	30	9221 C	1.0
TOTAL SUSPENDED SOLIDS (TSS)		10.0	mg/L	1.1	mg/L	30	2540 D-2011	1.0

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

250,000 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

Ongoing collection system survey to identify sources of I&I.

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

a. The area surrounding the treatment plant, including all unit processes.

b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.

c. Each well where wastewater from the treatment plant is injected underground.

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.

f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g, chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ✓ Yes ____ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: Recyc Systems,Inc

Mailing Address: P.O Box 562 Remington, Va 22734

Telephone Number: (540) 547-3300

Responsibilities of Contractor: Transport dewatered sludge and land apply

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

001 (Adding U.V. lights, digesters, upgrading bar racks and aeration systems

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

____ Yes ✓ No

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

n/a

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	___/___/_____	___/___/_____
– End construction	___/___/_____	___/___/_____
– Begin discharge	___/___/_____	___/___/_____
– Attain operational level	___/___/_____	___/___/_____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ____Yes ____No

Describe briefly: [redacted]

B.6. EFFLUENT TESTING DATA (GREATER THAN O.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	2.2	mg/L	0.14	mg/L	31	4500-NH3 2011	0.1mg/L
CHLORINE (TOTAL RESIDUAL, TRC)	NA	use U.V.	NA	mg/L			
DISSOLVED OXYGEN	10.3	mg/L	8.0	mg/L	31	4500-OG-2011	0.1 mg/L
TOTAL KJELDAHL NITROGEN (TKN)	1.26	mg/L	1.00	mg/L	31	4500-NH3D-2011	0.1 mg/L
NITRATE PLUS NITRITE NITROGEN	2.88	mg/L	2.32	mg/L	4	4500-NO3E-2011	0.1mg/L
OIL and GREASE	<5		<5		3	EPA1664A	5
PHOSPHORUS (Total)	0.33	mg/L	0.13	mg/L	31	4500-P E 2011	0.1 mg/L
TOTAL DISSOLVED SOLIDS (TDS)	<0.1	mg/L	<0.1	mg/L	3	SM2540C	0.1mg/L
OTHER							

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

Little Falls Run Wastewater Treatment Facility VA0076392

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

✓ Basic Application Information packet

Supplemental Application Information packet:

✓ Part D (Expanded Effluent Testing Data)

✓ Part E (Toxicity Testing: Biomonitoring Data)

✓ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

____ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title: Anthony J. Romanello, ICMA-CM

Signature:

Telephone number: (540) 658-8605

Date signed: 2.10.15

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: See Atachments (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS $CaCO_3$)											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											

FACILITY NAME AND PERMIT NUMB
Little Falls Run Wastewater Treatmen facility VA0076392

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
CLOROBENZENE											
CHLORODIBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYLVINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
1,2-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLOROETHYLENE											
1,2-DICHLOROPROPANE											
1,3-DICHLORO-PROPYLENE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											
1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE											
1,1,2-TRICHLOROETHANE											
TRICHLORETHYLENE											
VINYL CHLORIDE											
Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.											
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DICHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											
PENTACHLOROPHENOL											
PHENOL											
2,4,6-TRICHLOROPHENOL											
Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.											
BASE-NEUTRAL COMPOUNDS.											
ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)ANTHRACENE											
BENZO(A)PYRENE											

FACILITY NAME AND PERMIT NUMB
Little Falls Run Wastewater Treatmen. .acility VA0076392

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE											
BENZO(GHI)PERYLENE											
BENZO(K)FLUORANTHENE											
BIS (2-CHLOROETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORONAPHTHALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											
DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ANTHRACENE											
1,2-DICHLOROBENZENE											
1,3-DICHLOROBENZENE											
1,4-DICHLOROBENZENE											
3,3-DICHLOROBENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											
2,4-DINITROTOLUENE											
2,6-DINITROTOLUENE											
1,2-DIPHENYLHYDRAZINE											

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROBUTADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI- METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											
Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.											
Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.											

END OF PART D.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:
Little Falls Run Wastewater Treatment Facility VA0076392

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

✓ chronic ✓ acute

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

	Test number:_____	Test number:_____	Test number:_____
a. Test information.			
Test species & test method number	See Attached testing data		
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			
b. Give toxicity test methods followed.			
Manual title			
Edition number and year of publication			
Page number(s)			
c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.			
24-Hour composite			
Grab			
d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)			
Before disinfection			
After disinfection			
After dechlorination			

	Test number:_____	Test number:_____	Test number:_____
e. Describe the point in the treatment process at which the sample was collected.			
Sample was collected:			
f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.			
Chronic toxicity			
Acute toxicity			
g. Provide the type of test performed.			
Static			
Static-renewal			
Flow-through			
h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.			
Laboratory water			
Receiving water			
i. Type of dilution water. It salt water, specify "natural" or type of artificial sea salts or brine used.			
Fresh water			
Salt water			
j. Give the percentage effluent used for all concentrations in the test series.			
k. Parameters measured during the test. (State whether parameter meets test method specifications)			
pH			
Salinity			
Temperature			
Ammonia			
Dissolved oxygen			
l. Test Results.			
Acute:			
Percent survival in 100% effluent	%	%	%
LC_{50}			
95% C.I.	%	%	%
Control percent survival	%	%	%
Other (describe)			

Chronic:			
NOEC	%	%	%
IC_{25}	%	%	%
Control percent survival	%	%	%
Other (describe)			

m. Quality Control/Quality Assurance.			
Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a Toxicity Reduction Evaluation?

____Yes ✓ No If yes, describe: _____

E.4. Summary of Submitted Biomonitoring Test Information. If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: _____ (MM/DD/YYYY)

Summary of results: (see instructions)

See attached toxicity testing data for specific information

END OF PART E.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

SUPPLEMENTAL APPLICATION INFORMATION

PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

✓ Yes ___ No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. 0

b. Number of CIUs. 1

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: Colonial Circuits, Inc.

Mailing Address: 1026 Warrenton Rd.
Fredericksburg, Virginia 22405

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

Printed circuit board manufacturing

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): Printed circuit boards, electorplating

Raw material(s): copper, silver, nickle, tin, lead

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

9,000 gpd (___ continuous or ✓ intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

1400 gpd (___ continuous or ✓ intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits ✓ Yes ___ No

b. Categorical pretreatment standards ✓ Yes ___ No

If subject to categorical pretreatment standards, which category and subcategory?

433 Metal Finishing

F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

____Yes ✓ No If yes, describe each episode.

n/a

RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe? ____Yes ✓ No (go to F.12.)

F.10. Waste Transport. Method by which RCRA waste is received (check all that apply):

_____Truck _____Rail _____Dedicated Pipe

F.11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste Number	Amount	Units
n/a		

CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

____Yes (complete F.13 through F.15.) ✓ No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

n/a

F.14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

n/a

F.15. Waste Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

____Yes ____No

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

____Continuous ____Intermittent If intermittent, describe discharge schedule.

END OF PART F.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

SUPPLEMENTAL APPLICATION INFORMATION

PART G. COMBINED SEWER SYSTEMS

If the treatment works has a combined sewer system, complete Part G.

G.1. System Map. Provide a map indicating the following: (may be included with Basic Application Information)

a. All CSO discharge points.

b. Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding natural resource waters).

c. Waters that support threatened and endangered species potentially affected by CSOs.

G.2. System Diagram. Provide a diagram, either in the map provided in G.1. or on a separate drawing, of the combined sewer collection system that includes the following information:

a. Locations of major sewer trunk lines, both combined and separate sanitary.

b. Locations of points where separate sanitary sewers feed into the combined sewer system.

c. Locations of in-line and off-line storage structures.

d. Locations of flow-regulating devices.

e. Locations of pump stations.

CSO OUTFALLS:

Complete questions G.3 through G.6 once for each CSO discharge point.

G.3. Description of Outfall.

a. Outfall number _____

b. Location _____
(City or town, if applicable) (Zip Code)

_____
(County) (State)

_____
(Latitude) (Longitude)

c. Distance from shore (if applicable) _____ ft.

d. Depth below surface (if applicable) _____ ft.

e. Which of the following were monitored during the last year for this CSO?

____Rainfall ____CSO pollutant concentrations ____CSO frequency

____CSO flow volume ____Receiving water quality

f. How many storm events were monitored during the last year? _____

G.4. CSO Events.

a. Give the number of CSO events in the last year.

_____ events (___ actual or ___ approx.)

b. Give the average duration per CSO event.

_____ hours (____ actual or ____ approx.)

c. Give the average volume per CSO event.

_____ million gallons (_____ actual or _____ approx.)

d. Give the minimum rainfall that caused a CSO event in the last year.

_____ inches of rainfall

G.5. Description of Receiving Waters.

a. Name of receiving water: _____

b. Name of watershed/river/stream system: _____

United States Soil Conservation Service 14-digit watershed code (if known): _____

c. Name of State Management/River Basin: _____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

G.6. CSO Operations.

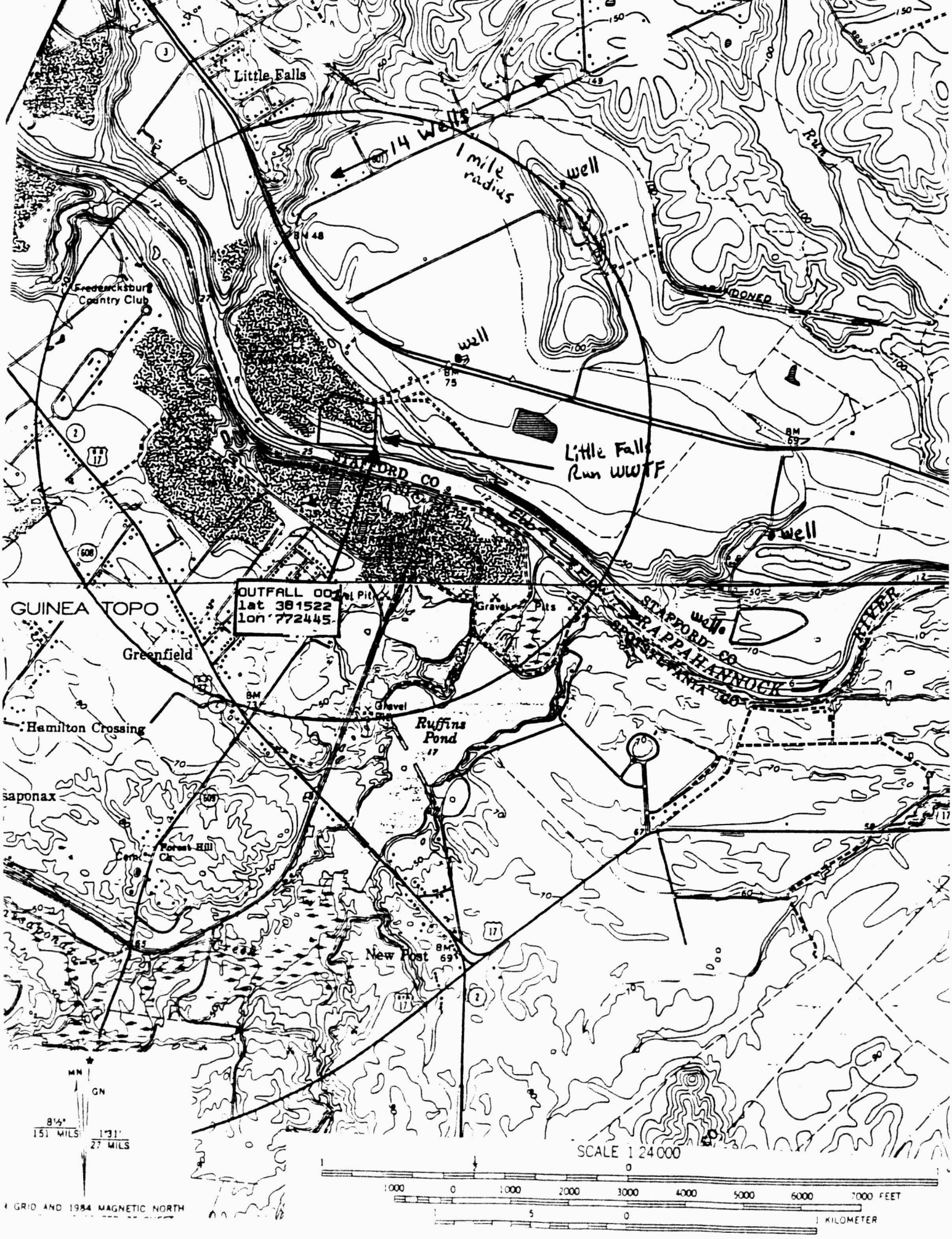
Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

_____

_____

END OF PART G.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

Additional information, if provided, will appear on the following pages.


Little Falls
14 Wells
1 mile radius
well
Fredericksburg Country Club
well
Little Falls Run WWTF
STAFFORD CO
well
OUTFALL 001
lat 381522
lon 772445
GUINEA TOPO
Greenfield
Gravel Pits
RAPPAHANNOCK
RIVER
Hamilton Crossing
Ruffins Pond
saponax
Forest Hill Cem
New Post
SCALE 1 24 000
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 5 0 1 KILOMETER
GRID AND 1984 MAGNETIC NORTH

BIOMONITORING RESULTS

Little Falls Run Wastewater Treatment Facility (VA0076392)

Table 1. Summary of Toxicity Test Results for Outfall 001

TEST DATE	TEST TYPE/ORGANISM	IC_{25} (%)	48-hour LC_{50} (%)	NOEC (%)	% SURV	LAB	REMARKS
8/3/1994	Acute *C. dubia*		>100		100	JRA	1st Annual
8/2/1994	Chronic *C. dubia*			100 SR	100	JRA	
8/22/1995	Acute *C. dubia*		>100		95	JRA	2nd Annual
8/17/1995	Chronic *C. dubia*			100 SR	100	JRA	
8/2/1996	Acute *C. dubia*		>100		100	JRA	3rd Annual
7/30/1996	Chronic *C. dubia*			100 SR	100	JRA	
7/17/1997	Acute *C. dubia*		>100		100	CBI	4th Annual
7/15/1997	Chronic *C. dubia*			5.4 R	100	CBI	
8/27/1997	Acute *C. dubia*		>100		95	CBI	retest
8/25/1997	Chronic *C. dubia*			100 SR	100	CBI	
7/30/1998	Acute *C. dubia*		>100		100	JRA	5th Annual
7/28/1998	Chronic *C. dubia*			100 SR	100	JRA	
7/28/1999	Acute *C. dubia*		>100		100	JRA	6th Annual
7/26/1999	Chronic *C. dubia*			100 SR	100	JRA	
	Permit Reissued November 18, 1999						
5/11/2000	Acute *C. dubia*		>100		100	JRA	1st Annual
5/9/2000	Chronic *C. dubia*			100 SR	100	JRA	
6/21/2001	Acute *C. dubia*		>100		100	JRA	2nd Annual
6/19/2001	Chronic *C. dubia*			100 SR	100	JRA	
6/19/2002	Acute *C. dubia*		>100		100	JRA	3rd Annual
6/18/2002	Chronic *C. dubia*			100 SR	90	JRA	
6/25/2003	Acute *C. dubia*		>100		100	JRA	4th Annual
6/23/2003	Chronic *C. dubia*			100 SR	80	JRA	
6/23/2004	Acute *C. dubia*		>100		100	JRA	5th Annual
6/21/2004	Chronic *C. dubia*			100 SR	100	JRA	
	Permit Reissued June 13, 2005						
9/19/2005	Chronic P.promelas		>100		100	JRA	1st Annual
9/19/2005	Chronic *C. dubia*			100 SR	100	JRA	
5/22/2006	Chronic P.promelas		>100		6.25	JRA	2nd Annual
5/22/2006	Chronic *C. dubia*			100 SR	12.5	JRA	
10/9/2006	Chronic P.promelas		>100		100	JRA	retest
10/9/2006	Chronic *C. dubia*			100 SR	100	JRA	
5/15/2007	Chronic P.promelas		>100		100	JRA	3rd Annual
5/15/2007	Chronic *C. dubia*			100 SR	100	JRA	
7/14/2008	Chronic P.promelas		>100		100	JRA	4th Annual
7/14/2008	Chronic *C. dubia*			100 SR	100	JRA	
6/1/2009	Chronic P.promelas		>100		100	JRA	5th Annual
6/1/2009	Chronic *C. dubia*			100 SR	100	JRA	

ABBREVIEATIONS:

SR - Survival and Reproduction

% SURV - Percent survival in 100% effluent

JRA - James R. Reed & Associates

BIOMONITORING RESULTS

Little Falls Run Wastewater Treatment Facility (VA0076392)

	Permit Reissued September 29,2010						
TEST DATE	TEST TYPE/ORGANISM	IC_{25} (%)	48-hour LC_{50} (%)	NOEC (%)	% SURV	LAB	REMARKS
6/14/2010	Chronic P.promelas		>100		100	JRA	1st Annual
	Chronic *C. dubia*			100 SR	100	JRA	
5/10/2011	Chronic P.promelas		>100		100	JRA	2nd QTR
	Chronic *C. dubia*			100 SR	100	JRA	
7/25/2011	Chronic P.promelas		>100		100	JRA	3rd QTR
	Chronic *C. dubia*			100 SR	100	JRA	
11/15/2011	Chronic P.promelas		>100		100	JRA	4th QTR
	Chronic *C. dubia*			50 SR	100	JRA	
3/8/2012	Chronic P.promelas		>100		100	JRA	1st QTR
	Chronic *C. dubia*			100 SR	100	JRA	
6/14/2012	Chronic P.promelas		>100		100	JRA	2nd QTR
	Chronic *C. dubia*			100 SR	100	JRA	
8/27/2012	Chronic P.promelas		>100		100	JRA	3rd QTR
	Chronic *C. dubia*			100 SR	100	JRA	
12/4/2012	Chronic P.promelas		>100		50	JRA	4th Qtr
	Chronic *C. dubia*			50 SR	100	JRA	
2/26/2013	Chronic P.promelas		>100		100	JRA	1st Annual
	Chronic *C. dubia*			100 SR	100	JRA	
9/9/2014	Chronic P.promelas		>100		100	JRA	2nd Annual
	Chronic *C. dubia*			100 SR	100	JRA	

ABBREVIEATIONS:

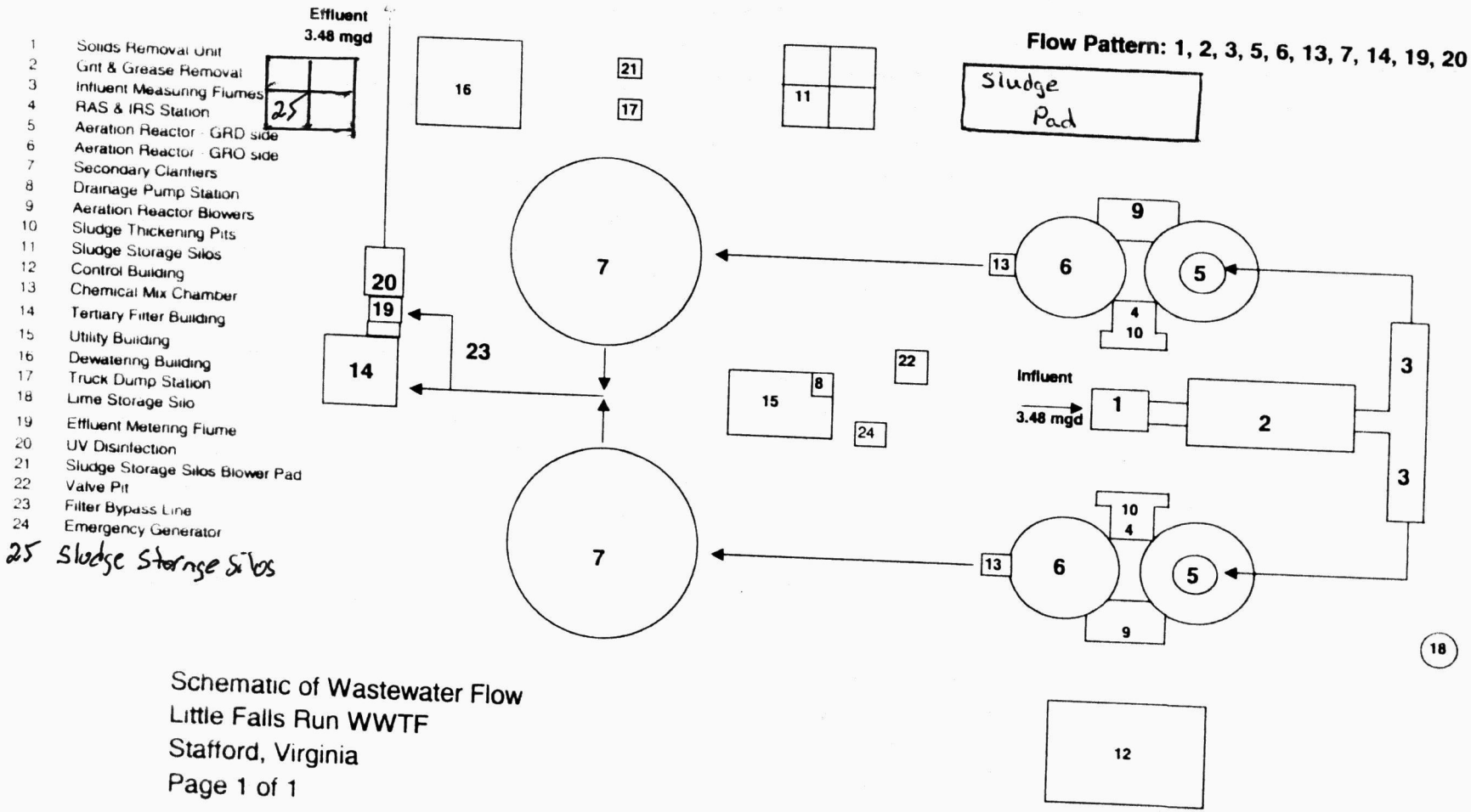
SR - Survival and Reproduction

% SURV - Percent survival in 100% effluent

JRA - James R. Reed & Associates

CBI - Coastal Bioanalysts Inc.

New Sludge Silos
2010
Image © 2009 Commonwealth of Virginia
© 2009 Tele Atlas
Google



Schematic of Wastewater Flow
Little Falls Run WWTF
Stafford, Virginia

LITTLE FALLS RUN WASTEWATER TREATMENT PLANT
SUMMARY SHEET
2010

	FLOW		SUSPENDED SOLIDS		CBOD5		TOTAL PHOSPHORUS		AMMONIA		TKN		NO2	NO3	TOTAL	*E-Coli*	Train I	Train II
MONTH	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	EFF	EFF	NITROGEN	EFF	MLSS	MLSS
JANUAR	3.837	4.000	259.9	2.0	170.4	0	7.18	0.15	27.9	0.71	30.0	1.84	0.04	1.87	3.74	2		7480
FEBRUA	4.667	4.574	188.8	1.5	143.9	0	5.80	0.38	28.0	0.00	30.7	0.61	0.01	3.77	4.39	5		6850
MARCH	4.618	4.242	234.4	1.3	135.4	0	6.40	0.32	30.1	0.91	35.1	2.17	0.03	2.71	4.91	4		6041
APRIL	3.405	3.377	272.1	1.5	171.1	0	8.03	0.18	33.3	1.18	40.8	2.46	0.04	0.96	3.46	4		5793
MAY	3.078	3.002	294.2	2.0	212.2	0	10.00	0.51	39.0	0.23	43.4	1.29	0.05	1.50	3.54	10	6147	6020
JUNE	3.030	2.787	293.9	1.8	215.6	0	9.21	0.39	44.9	0.11	48.3	1.45	0.03	2.36	3.71	2	5558	
JULY	2.814	2.814	268.0	1.9	211.9	0	8.39	0.43	44.9	0.05	43.6	1.06	0.03	2.36	3.38	3	4440	
AUGUST	3.173	2.846	290.3	1.4	193.0	0	7.88	0.14	40.6	0.12	41.7	0.73	0.01	1.56	2.09	5	4085	4128
SEPTEM	2.909	2.827	304.8	1.7	208.5	0	8.34	0.11	40.3	0.00	43.4	0.54	0.02	0.98	1.52	6		4408
OCTOBE	3.065	2.863	303.9	1.2	199.3	0	7.99	0.17	34.4	0.15	37.6	0.75	0.06	1.04	2.08	2		4554
NOVEME	3.151	2.996	305.5	1.4	218.1	0	8.34	0.16	39.0	0.21	50.1	1.03	0.12	1.50	2.64	4		4333
DECEME	3.054	2.641	341.9	1.4	229.8	0	9.27	0.20	49.9	0.08	68.6	1.07	0.05	2.04	3.14	4		5441
AVG.	3.400	3.247	279.8	1.6	192.4	<5.0	8.07	0.26	37.69	0.31	42.78	1.25	0.04	1.89	3.22	4	5058	5505
MAX.	4.667	4.574	341.9	2	229.8	<5.0	10.00	0.51	49.90	1.18	68.60	2.46	0.12	3.77	4.91	10	6147	7480
MIN.	2.814	2.641	188.8	1.2	135.4	<5.0	5.80	0.11	27.90	0.00	30.00	0.54	0.01	0.96	1.52	2	4085	4128
% REM.				99.4%				96.8%		99.2%		97.1%						

LITTLE FALLS RUN WASTEWATER TREATMENT PLANT
SUMMARY SHEET

2011

	FLOW		SUSPENDED SOLIDS		CBOD5		TOTAL PHOSPHORUS		AMMONIA		TKN		NO2	NO3	TOTAL	*E-Coli*	Train I	Train II
MONTH	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	EFF	EFF	NITROGEN	EFF	MLSS	MLSS
JANUARY	3.131	2.610	332.5	1.2	264.1	0	9.15	0.17	47.9	0.34	58.7	1.22	0.06	1.78	3.00	1		5760
FEBRUAR	3.242	2.767	289.9	1.6	218.1	0	9.35	0.19	41.7	0.19	54.5	0.60	0.04	2.91	3.51	2		5388
MARCH	4.064	3.503	279.8	1.1	181.4	0	8.69	0.17	36.8	0.22	37.5	0.64	0.03	1.99	2.63	2		5289
APRIL	3.258	3.088	293.2	1.5	195.9	0	7.73	0.24	45.3	0.14	44.4	0.40	0.02	2.26	2.66	2	5332	
MAY	2.949	2.881	288.1	1.5	199.6	0	7.91	0.21	45.1	0.00	49.7	0.91	0.03	2.96	3.87	3	4162	
JUNE	2.805	2.805	276.8	1.1	189.6	0	8.73	0.25	51.0	0.00	52.0	0.94	0.03	4.12	5.06	3	3849	
JULY	2.915	2.667	302.4	0.8	191.0	0	8.30	0.10	47.1	0.04	50.7	0.90	0.03	2.48	3.38	12	3617	
AUGUST	2.806	2.794	245.1	1.2	206.9	0	7.87	0.10	40.8	0.31	51.1	1.40	0.03	2.69	4.09	3	3857	
SEPTEMB	4.192	4.185	228.8	1.6	173.4	0	6.55	0.20	42.6	0.24	48.4	1.49	0.05	1.99	3.51	9	4003	
OCTOBER	3.312	3.227	277.8	1.5	213.0	0	7.76	0.10	38.0	0.31	46.8	1.02	0.07	1.65	2.70	5	4099	
NOVEMBE	3.232	3.128	337.3	1.7	251.6	0	9.67	0.10	41.9	0.58	64.0	2.65	0.21	2.94	5.77	5	4494	
DECEMBE	3.836	3.784	300.4	2.0	207.8	0	7.53	0.12	29.6	0.22	38.6	0.65	0.03	2.64	3.29	6	5202	
AVG.	3.312	3.120	287.7	1.4	207.7	<5.0	8.27	0.16	42.32	0.22	49.70	1.07	0.05	2.53	3.62	4	4291	5479
MAX.	4.192	4.185	337.3	2	264.1	<5.0	9.67	0.25	51.00	0.58	64.00	2.65	0.21	4.12	5.77	12	5332	5760
MIN.	2.805	2.61	228.8	0.8	173.4	<5.0	6.55	0.10	29.60	0.00	37.50	0.40	0.02	1.65	2.63	1	3617	5289
% REM.				99.5%				98.0%		99.5%		97.9%						

LITTLE FALLS RUN WASTEWATER TREATMENT PLANT
SUMMARY SHEET

2012

	FLOW		SUSPENDED SOLIDS		CBOD5		TOTAL PHOSPHORUS		AMMONIA		TKN		NO2	NO3	TOTAL	*E-Coli*	Train I	Train II
MONTH	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	EFF	EFF	NITROGEN	EFF	MLSS	MLSS
JANUARY	3.404	3.178	321.8	1.9	231.8	0	9.42	0.20	31.2	0.08	37.8	0.84	0.03	3.42	4.30	4	5,513	
FEBRUAR	3.299	3.155	341.4	1.8	255.7	0	9.16	0.20	30.0	0.07	38.6	0.89	0.03	3.70	4.59	5	5298	
MARCH	3.350	3.194	301.0	3.4	229.4	0	8.22	0.30	37.8	0.26	47.2	1.25	0.09	4.51	5.83	32	5382	4050
APRIL	3.111	3.072	318.1	1.9	251.0	0	8.68	0.20	42.8	0.71	50.4	1.42	0.03	4.11	5.53	6		4939
MAY	3.308	3.336	304.1	1.7	235.8	0	8.65	0.20	59.3	0.05	41.9	1.38	0.03	4.27	5.65	10		3358
JUNE	3.005	2.955	308.3	1.9	251.8	0	8.77	0.20	45.5	0.04	61.7	1.34	0.04	2.05	3.39	23		2892
JULY	2.875	2.833	307.5	2.5	285.2	0	8.39	0.10	45.0	0.05	48.7	0.85	0.02	1.83	2.68	3		2868
AUGUST	2.901	2.804	300.1	1.3	238.1	0	7.99	0.10	44.7	0.35	57.0	0.75	0.05	0.98	1.73	2		3470
SEPTEMB	3.179	2.711	315.9	1.6	248.6	0	9.34	0.10	44.4	0.16	61.7	1.52	0.05	1.55	3.07	2		3708
OCTOBEF	3.107	2.807	330.7	1.9	256.7	0	9.41	0.10	44.5	0.18	54.3	1.46	0.04	1.33	2.79	3		4091
NOVEMBE	2.987	2.592	318.6	1.5	253.2	0	8.83	0.20	49.4	0.17	62.8	1.60	0.06	2.42	4.05	7		3857
DECEMBE	3.301	2.898	341.8	2.5	273.4	0	9.44	0.20	50.1	0.47	68.3	1.36	0.10	2.60	4.04	18		4587
AVG.	3.152	2.961	317.4	2.0	250.9	<5.0	8.86	0.18	43.73	0.22	52.53	1.22	0.05	2.73	3.97	10	5398	3782
MAX.	3.404	3.336	341.8	3.4	285.2	<5.0	9.44	0.30	59.30	0.71	68.30	1.60	0.10	4.51	5.83	32	5513	4939
MIN.	2.875	2.592	300.1	1.3	229.4	<5.0	7.99	0.10	30.00	0.04	37.80	0.75	0.02	0.98	1.73	2	5298	2868
% REM.				99.4%				98.0%		99.5%		97.7%						

LITTLE FALLS RUN WASTEWATER TREATMENT PLANT
SUMMARY SHEET

2013

	FLOW		SUSPENDED SOLIDS		CBOD5		TOTAL PHOSPHORUS		AMMONIA		TKN		NO2	NO3	TOTAL	*E-Coli*	Train I	Train II
MONTH	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	EFF	EFF	NITROGEN	EFF	MLSS	MLSS
JANUARY	3.499	3.028	285.4	2.7	227.0	0	7.86	0.20	38.3	0.08	51.3	1.26	0.06	1.83	3.09	10		5281
FEBRUAR	3.222	2.842	283.8	2.4	234.7	0	7.75	0.20	46.7	0.08	56.6	0.85	0.07	2.53	3.41	9		5348
MARCH	3.835	3.462	250.7	2.2	188.6	0	7.18	0.20	37.6	0.60	48.2	1.54	0.07	2.41	3.98	9		5498
APRIL	3.334	2.989	284.8	2.4	232.8	1.2	7.90	0.15	42.0	0.22	44.1	0.99	0.02	2.45	3.43	4		5245
MAY	2.939	3.175	298.6	2.6	242.7	0	7.94	0.28	46.6	0.17	48.1	1.31	0.05	3.51	4.81	6	4731	
JUNE	2.918	3.157	281.7	2.1	228.3	0	8.60	0.18	43.4	0.11	49.9	1.55	0.06	2.68	4.23	6	3383	
JULY	2.635	2.776	276.2	2.2	245.5	0	8.85	0.16	41.6	<QL	47.3	1.19	0.06	3.25	4.44	4	3450	
AUGUST	2.844	2.821	296.7	2.2	228.4	0	8.62	0.13	48.9	0.10	41.9	1.08	0.02	2.12	3.20	5	3485	
SEPTEMB	2.620	2.546	293.7	2.3	265.5	0	8.40	0.17	49.8	0.14	59.5	1.05	0.02	2.70	3.75	7	3306	
OCTOBEF	2.948	2.769	280.8	2.6	250.8	0	9.05	0.15	46.8	0.28	51.6	0.84	0.03	2.18	3.02	9	3536	
NOVEMBE	2.805	2.645	296.3	2.9	255.9	1.5	8.28	0.15	46.1	1.13	51.1	2.64	0.06	2.09	1.73	22	3570	
DECEMBE	3.729	3.604	258.8	3.5	204.1	0	8.19	0.17	34.8	0.21	34.7	1.33	0.09	3.15	4.54	11	4272	
AVG.	3.111	2.985	282.3	2.5	233.7	<5.0	8.22	0.18	43.55	0.28	48.69	1.30	0.05	2.58	3.64	9	3717	5343
MAX.	3.835	3.604	298.6	3.5	265.5	<5.0	9.05	0.28	49.80	1.13	59.50	2.64	0.09	3.51	4.81	22	4731	5498
MIN.	2.62	2.546	250.7	2.1	188.6	<5.0	7.18	0.13	34.80	0.08	34.70	0.84	0.02	1.83	1.73	4	3306	5245
% REM.				99.1%				97.8%		99.3%		97.3%						

LITTLE FALLS RUN WASTEWATER TREATMENT PLANT
SUMMARY SHEET

2014

	FLOW		SUSPENDED SOLIDS		CBOD5		TOTAL PHOSPHORUS		AMMONIA		TKN		NO2	NO3	TOTAL	*E-Coli*	Train I	Train II
MONTH	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	EFF	EFF	NITROGEN	EFF	MLSS	MLSS
JANUARY	3.414	3.378	254.9	2.9	204.0	0	8.95	0.14	34.0	0.75	40.8	1.57	0.05	3.91	5.48	5	5,462	
FEBRUAR	3.685	3.742	216.0	3.3	173.6	0	5.87	0.17	27.1	1.89	27.3	2.36	0.04	2.74	5.10	8	5419	
MARCH	3.691	3.633	254.2	4.3	201.2	6.2	7.33	0.26	30.9	1.07	45.5	4.84	0.05	2.07	6.91	7	4992	
APRIL	3.723	3.770	216.2	3.9	256.3	3.2	6.80	0.21	33.7	0.25	44.9	1.40	0.04	2.51	3.91	3	4420	
MAY	3.643	3.859	245.0	2.9	206.0	1	7.69	0.37	30.3	0.18	38.1	1.39	0.05	3.36	4.75	5	4151	
JUNE	2.910	2.865	273.7	2.6	249.2	0	9.16	0.37	40.4	0.71	44.8	1.91	0.03	3.95	5.87	13	3839	2390
JULY	3.295	2.919	307.2	1.1	255.9	0	8.59	0.13	37.8	0.14	47.6	1.01	0.02	2.32	3.32	3		3664
AUGUST	2.824	2.664	289.7	8.1	254.5	0	8.17	0.24	47.6	0.08	48.2	1.08	0.03	3.04	4.12	4		2978
SEPTEMB	2.756	2.609	345.3	1.7	258.4	0	9.53	0.18	46.5	<QL	50.2	0.88	0.03	2.75	3.64	4		3083
OCTOBEF	2.701	2.639	341.8	2.5	269.0	0	8.86	0.15	52.9	0.06	54.8	1.08	0.03	3.13	4.21	21		3085
NOVEMBE	2.729	2.728	367.1	2.8	305.9	0	9.46	0.14	55.5	0.02	50.1	1.42	0.05	3.07	4.48	23		3516
DECEMBE	2.874	2.885	343.6	2.8	292.5	0	9.05	0.27	47.3	0.25	58.5	1.11	0.07	3.40	4.53	22		4614
AVG.	3.187	3.141	287.9	3.2	243.9	<5.0	8.29	0.22	40.33	0.49	45.90	1.67	0.04	3.02	4.69	10	4714	3333
MAX.	3.723	3.859	367.1	8.1	305.9	<5.0	9.53	0.37	55.50	1.89	58.50	4.84	0.07	3.95	6.91	23	5462	4614
MIN.	2.701	2.609	216	1.1	173.6	<5.0	5.87	0.13	27.10	0.02	27.30	0.88	0.02	2.07	3.32	3	3839	2390
% REM.				98.9%				97.4%		98.8%		96.4%						

FACILITY NAME: Little Falls Run ... WTF **VPDES PERMIT NUMBER:** VA0076392

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into four sections. Section A pertains to all applicants. The applicability of Sections B, C and D depends on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Does this facility generate sewage sludge? X Yes _____ No

   Does this facility derive a material from sewage sludge? _____ Yes X No

   If you answered "Yes" to either, complete Section B (Generation Of Sewage Sludge or Preparation Of A Material Derived From Sewage Sludge).

3. Does this facility apply sewage sludge to the land? _____ Yes X No

   Is sewage sludge from this facility applied to the land? X Yes _____ No

   If you answer "No" to all above, skip Section C.

   If you answered "Yes" to either, answer the following three questions:

   a. Does the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions? _____ Yes X No

   b. Is sewage sludge from this facility placed in a bag or other container for sale or give-away for application to the land? _____ Yes X No

   c. Is sewage sludge from this facility sent to another facility for treatment or blending? _____ Yes X No

   If you answered "No" to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

   If you answered "Yes" to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? _____ Yes X No

   If "Yes", complete Section D (Surface Disposal).

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.

a. Facility name: Little Falls Run Wastewater Treatment Facility

b. Contact person: Janet L.Spencer

Title: Deputy Director of Utilities

Phone: (540) 658-8620

c. Mailing address:

Street or P.O. Box: P.O. Box 339

City or Town: Stafford State: VA Zip: 22555-0339

d. Facility location:

Street or Route #: 100 Michael Scott Lane

County: Stafford County

City or Town: _____ State: VA Zip: 22405

e. Is this facility a Class I sludge management facility? X Yes _____ No

f. Facility design flow rate: 8.0 mgd

g. Total population served: 38,384

h. Indicate the type of facility:

X Publicly owned treatment works (POTW)

_____ Privately owned treatment works

_____ Federally owned treatment works

_____ Blending or treatment operation

_____ Surface disposal site

_____ Other (describe): _____

2. Applicant Information. If the applicant is different from the above, provide the following:

a. Applicant name: Stafford County Board of Supervisors

b. Mailing address:

Street or P.O. Box: P.O. Box 339

City or Town: Stafford State: VA Zip: 22555-0339

c. Contact person: Anthony J. Romanello

Title: County Administrator

Phone: (540) 658-8605

d. Is the applicant the owner or operator (or both) of this facility?
X owner X operator

e. Should correspondence regarding this permit be directed to the facility or the applicant?
_____ facility X applicant

3. Permit Information.

a. Facility's VPDES permit number (if applicable): VA0076392

b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:

Permit Number:	Type of Permit:
_____	NA
_____	_____

4. **Indian Country.** Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? _____ Yes _X_ No If "Yes", describe:

5. **Topographic Map.** Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility:
   a. Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
   b. Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

6. **Line Drawing.** Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

7. **Contractor Information.** Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? _X_ Yes _____ No

   If "Yes", provide the following for each contractor (attach additional pages if necessary).

   Name: Recyc Systems Inc.

   Mailing address:

   Street or P.O. Box: P.O Box 562

   City or Town: Remington State: Va Zip: 22734

   Phone: (540) 547-3300

   Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:

   See Attachments

   If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

8. **Pollutant Concentrations.** Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic	4.75	1/14 - 12/14	SM846 – 7061A	0.2
Cadmium	2.0	1/14 - 12/14	SM846 – 6010B	7
Chromium	No Data	1/14 - 12/14		
Copper	391.75	1/14 - 12/14	SM846 – 6010B	1
Lead	20.75	1/14 - 12/14	SM846 – 6010B	5
Mercury	1.5	1/14 - 12/14	SM846 – 7741A	0.2
Molybdenum	6.5	1/14 - 12/14	SM846 – 6010B	5
Nickel	29.0	1/14 - 12/14	SM846 – 6010B	5
Selenium	5.25	1/14 - 12/14	SM846 – 7741A	0.1
Zinc	781.25	1/14 - 12/14	SM846 – 6010B	1

9. **Certification.** Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

X Section A (General Information)

X Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)

X Section C (Land Application of Bulk Sewage Sludge)

_____ Section D (Surface Disposal)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name and official title: Anthony J. Romanello, ICMA-CM County Administrator

Signature _____ Date Signed 2.10.15

Telephone number (540) 658-8605

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. **Amount Generated On Site.**
   Total dry metric tons per 365-day period generated at your facility: 1015 dry metric tons

2. **Amount Received from Off Site.** If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.
   a. Facility name: N/A
   b. Contact Person: _____
      Title: _____
      Phone: (_____) _____
   c. Mailing address:
      Street or P.O. Box: _____
      City or Town: _____ State: _____ Zip: _____
   d. Facility location: _____
      (not P.O. Box) _____
   e. Total dry metric tons per 365-day period received from this facility: _____ dry metric tons
   f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:

      _____

      _____

3. **Treatment Provided at Your Facility.**
   a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?
      _____ Class A _X_ Class B _____ Neither or unknown
   b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: Aerobic Digestion

      _____
   c. Which vector attraction reduction option is met for the sewage sludge at your facility?
      _____ Option 1 (Minimum 38 percent reduction in volatile solids)
      _____ Option 2 (Anaerobic process, with bench-scale demonstration)
      _____ Option 3 (Aerobic process, with bench-scale demonstration)
      _X_ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
      _____ Option 5 (Aerobic processes plus raised temperature)
      _____ Option 6 (Raise pH to 12 and retain at 11.5)
      _____ Option 7 (75 percent solids with no unstabilized solids)
      _____ Option 8 (90 percent solids with unstabilized solids)
      _____ None or unknown
   d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: Aerobic Digestion

      _____
   e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: NA

      _____

4. **Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and One of Vector Attraction Reduction Options 1-8 (EQ Sludge).**

   (If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)

   a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land:

   NA dry metric tons

   b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?

   _____ Yes _____ No

5. **Sale or Give-Away in a Bag or Other Container for Application to the Land.**

   (Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

   a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: NA dry metric tons

   b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. **Shipment Off Site for Treatment or Blending.**

   (Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

   a. Receiving facility name: NA

   b. Facility contact: _____

   Title: _____

   Phone: (_____) _____

   c. Mailing address:

   Street or P.O. Box: _____

   City or Town: _____ State: _____ Zip: _____

   d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:

   _____ dry metric tons

   e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:

Permit Number:	Type of Permit:
_____	_____
_____	_____

   f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility?

   _____ Yes _____ No

   Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?

   _____ Class A _____ Class B _____ Neither or unknown

   Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge: _____

   _____

   g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? _____ Yes _____ No

   Which vector attraction reduction option is met for the sewage sludge at the receiving facility?

   _____ Option 1 (Minimum 38 percent reduction in volatile solids)

   _____ Option 2 (Anaerobic process, with bench-scale demonstration)

_____ Option 3 (Aerobic process, with bench-scale demonstration)

✓ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)

_____ Option 5 (Aerobic processes plus raised temperature)

_____ Option 6 (Raise pH to 12 and retain at 11.5)

_____ Option 7 (75 percent solids with no unstabilized solids)

_____ Option 8 (90 percent solids with unstabilized solids)

_____ None unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge: _____

h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?
_____ Yes _____ No

If "Yes", describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:

i. If you answered "Yes" to f, g or h above, attach a copy of any information you provide to the receiving facility to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.

j Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? _____ Yes _____ No

If "Yes", provide a copy of all labels or notices that accompany the product being sold or given away.

k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? _____ Yes _____ No. If "No", provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.

Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported. _____

7. Land Application of Bulk Sewage Sludge.

(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6. Complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:
1015 dry metric tons

b. Do you identify all land application sites in Section C of this application? X Yes _____ No

If "No", submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

c. Are any land application sites located in States other than Virginia? _____ Yes X No

If "Yes", describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV). ATTACHED

8. Surface Disposal.

(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: **NA** dry metric tons

b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?
_____ Yes _____ No

If "No", answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

c. Site name or number: _____

d. Contact person: _____

Title: _____

Phone: (_____) _____

Contact is: _____ Site Owner _____ Site operator

e. Mailing address:

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: _____ dry metric tons

g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number: Type of Permit:

_____ _____

9. Incineration.

(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: **NA** dry metric tons

b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?
_____ Yes _____ No

If "No", answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

c. Incinerator name or number: _____

d. Contact person: _____

Title: _____

Phone: (_____) _____

Contact is: _____ Incinerator Owner _____ Incinerator Operator

e. Mailing address:

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: _____ dry metric tons

g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing

of sewage sludge at this incinerator:

Permit Number: Type of Permit:

_____ _____

_____ _____

10. Disposal in a Municipal Solid Waste Landfill.

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

a. Landfill name: _____

b. Contact person: _____

Title: _____

Phone: (_____) _____

Contact is: _____ Landfill Owner _____ Landfill Operator

c. Mailing address:

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

d. Landfill location.

Street or Route #: _____

County: _____

City or Town: _____ State: _____ Zip: _____

e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill:

_____ dry metric tons

f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:

Permit Number: Type of Permit:

_____ _____

_____ _____

g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?
_____ Yes _____ No

h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? _____ Yes _____ No

i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? _____ Yes _____ No

Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported. _____

_____

FACILITY NAME: Little Falls Run WWTF **VPDES PERMIT NUMBER:** VA0076392

SECTION C. LAND APPLICATION OF BULK SEWAGE SLUDGE

Complete this section for sewage sludge that is land applied unless any of the following conditions apply:

- ***The sewage sludge meets the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements and one of the vector attraction reduction options 1-8 (fill out B.4 instead) (EQ Sludge); or***
- ***The sewage sludge is sold or given away in a bag or other container for application to the land (fill out B.5 instead); or***
- ***You provide the sewage sludge to another facility for treatment or blending (fill out B.6 instead).***

Complete Section C for every site on which the sewage sludge that you reported in B.7 is land applied.

1. Identification of Land Application Site.

a. Site name or number: **See attached sheet for field information**

b. Site location (Complete i and ii)

i. Street or Route#: _____

County: _____

City or Town: _____ State: _____ Zip: _____

ii. Latitude: _____ Longitude: _____

Method of latitude/longitude determination

_____ USGS map _____ Filed survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

2. Owner Information.

a. Are you the owner of this land application site? _____ Yes __X___ No

b. If "No", provide the following information about the owner:

Name: **See attached sheet**

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

Phone: (_____) _____

3. Applier Information:

a. Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site? _____ Yes ___X__ No

b. If "No", provide the following information for the person who applies the sewage sludge:

Name: **Recyc Systems Inc** _____

Street or P.O. Box **P.O Box 562**

City or Town: **Remington State: VA Zip: 22734**

Phone: (_____**540**__) ___**547- 3300**_____

c. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the person who applies sewage sludge to this land application site:

Permit Number:	Type of Permit:
_____	_____**See attached sheets**_____
_____	_____

4. Site Type. Identify the type of land application site from among the following:

_____ Agricultural land _____ Reclamation site _____ Forest

_____ Public contact site _____ Other (describe _____

5. Vector Attraction Reduction.

Are any vector attraction reduction requirements met when sewage sludge is applied to the land application site?
_____ Yes __X__ No If "Yes", answer a and b.

a. Indicate which vector attraction reduction option is met:

_____ Option 9 (Injection below land surface)

_____ Option 10 (Incorporation into soil within 6 hours)

b. Describe, on this form or on another sheet of paper, any treatment processes used at the land application site to reduce the vector attraction properties of sewage sludge:

6. Cumulative Loadings and Remaining Allotments. **Not Applicable**

(Complete Question 6 only if the sewage sludge applied to this site since July 20, 1993 is subject to the cumulative pollutant loading rates (CPLRs) - see instructions.)

a. Have you contacted DEQ or the permitting authority in the state where the sewage sludge subject to the CPLRs will be applied to ascertain whether bulk sewage sludge subject to the CPLRs has been applied to this site since July 20, 1993? _____ Yes _____ No

If "No", sewage sludge subject to the CPLRs may not be applied to this site.

If "Yes", provide the following information: N/A

Permitting authority: _____

Contact person: _____

b. Based upon this inquiry, has bulk sewage sludge subject to the CPLRs been applied to this site since July 20, 1993? _____ Yes _____ No If "No", skip the rest of Question 6. If "Yes", answer questions c - e.

c. Site size, in hectares: _____ (one hectare = 2.471 acres)

d. Provide the following information for every facility other than yours that is sending or has sent sewage sludge subject to the CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

Facility name: _____

Facility contact: _____

Title: _____

Phone: (_____) _____

Mailing address. N/A

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

e. Provide the total loading and allotment remaining, in kg/hectare, for each of the following pollutants:

	Cumulative loading	Allotment remaining
Arsenic	_____	_____
Cadmium	_____	_____
Copper	_____	_____
Lead	_____	_____ N/A
Mercury	_____	_____
Nickel	_____	_____
Selenium	_____	_____
Zinc	_____	_____

Complete Questions 7-12 below only if you apply sewage sludge, or you are responsible for land application of sewage sludge. Information required by these questions may be prepared as attachments to this form. Skip the following questions if you contract land application to someone else (as indicated under Section A.7) who is responsible for the operation.

7. **Sludge Characterization.** Use the table below or a separate attachment, provide at least one analysis for each parameter.

PCBs (mg/kg)		
pH (S. U.)		
Percent Solids (%)		N/A
Ammonium Nitrogen (mg/kg)		
Nitrate Nitrogen (mg/kg)		
Total Kjeldahl Nitrogen (mg/kg)		
Total Phosphorus (mg/kg)		
Total Potassium (mg/kg)		
Alkalinity as $CaCO_3$* (mg/kg)		

* Lime treated sludge (10% or more lime by dry weight) should be analyzed for percent $CaCO_3$.

8. **Storage Requirements.**

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.

1) Water wells, abandoned or operating
2) Surface waters
3) Springs N/A
4) Public water supply(s)
5) Sinkholes
6) Underground and/or surface mines
7) Mine pool (or other) surface water discharge points
8) Mining spoil piles and mine dumps
9) Quarry(s)
10) Sand and gravel pits
11) Gas and oil wells
l2) Diversion ditch(s)
13) Agricultural drainage ditch(s)
14) Occupied dwellings, including industrial and commercial establishments
15) Landfills or dumps
16) Other unlined impoundments
17) Septic tanks and drainfields
18) Injection wells
19) Rock outcrops

b. A topographic map of sufficient detail to clearly show the following information:

1) Maximum and minimum percent slopes
2) Depressions on the site that may collect water
3) Drainageways that may attribute to rainfall run-on to or runoff from this site
4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding

c. Data and specifications for the storage facility lining material.

d. Plan and cross-sectional views of the storage facility.

e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

9. **Land Area Requirements.** Provide calculations justifying the land area requirements for land application of sewage sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the

sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings (CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application. N/A

10. **Landowner Agreement Forms.** Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant. N/A

11. **Ground Water Monitoring.** N/A

Are any ground water monitoring data available for this land application site? _____ Yes _____ No

If "Yes", submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

12. **Land Application Site Information.**

(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)

a. Provide a general location map for each county which clearly indicates the location of all the land application sites.

b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.

c. In order to ensure that land application of bulk sewage sludge will not impact federally listed threatened or endangered species or federally designated critical habitat, the applicant must notify the field office of the U. S. Department of the Interior, Fish and Wildlife Service (FWS), by a letter, the proposed land application activities with the identification of the land application sites. The address and phone number of FWS are provided below.

U.S. Fish and Wildlife Service
Virginia Field Office
P.O. Box 480
White Marsh, VA 23183
TEL: (804) 693-6694

Provide a copy of the notification letter with this application form.

d. Provide a soil survey map, preferably photographically based, with the field boundaries clearly marked. (A USDA-SCS soil survey map should be provided, if available.)

Provide a detailed legend for each soil survey map which uses accepted USDA-SCS descriptions of the typifying pedon for each soil series (soil type). Complex associations may be described as a range of characteristics. Soil descriptions shall include as a minimum the following information.

1) Soil symbol
2) Soil series, textural phase and slope range
3) Depth to seasonal high water table
4) Depth to bedrock
5) Estimated soil productivity group (for the proposed crop rotation)

Item e - h are required for sites receiving frequent application of sewage sludge

e. In order to verify the information provided in item d, characterize the soil at each land application site. Representative soil borings or test pits to a depth of five feet or to bedrock if shallower, are to be coordinated for the typifying pedon of each soil series (soil type). Soil descriptions shall include as a minimum the following information:

1) Soil symbol
2) Soil series, textural phase and slope range
3) Depth to seasonal high water table
4) Depth to bedrock
5) Estimated soil productivity group (for the proposed crop rotation)

f. Collect and analyze soil samples from each field, weighted to best represent each of the soil borings performed for Item e. Using the table below or a separate attachment, provide at least one analysis per sample for each of the following parameters.

Soil Organic Matter (%)	
Soil pH (std. units)	
Cation Exchange Capacity (meq/100g)	
Total Nitrogen (ppm)	
Organic Nitrogen (ppm)	
Ammonia Nitrogen (ppm)	
Nitrate Nitrogen (ppm)	N/A
Available Phosphorus (ppm)	
Exchangeable Potassium (mg/100g)	
Exchangeable Sodium (mg/100g)	
Exchangeable Calcium (mg/100g)	
Exchangeable Magnesium (mg/100g)	
Arsenic (ppm)	
Cadmium (ppm)	
Copper (ppm)	
Lead (ppm)	
Mercury (ppm)	
Molybdenum (ppm)	
Nickel (ppm)	
Selenium (ppm)	
Zinc (ppm)	
Manganese (ppm)	
Particle Size Analysis or USDA Textural Estimate (%)	

g. Relate the crop nutrient needs to anticipated yields, soil productivity rating and the various fertilizer or nutrient sources from sludge and chemical fertilizers. Describe any specialized agronomic management practices which may be required as a result of high soil pH. If the sludge is expected to possess an unusually high CCE or other unusual properties, provide a description of any plant tissue testing, supplemental fertilization or intensive agronomic management practices which may be necessary.

h. Using a narrative format and referencing any related charts, describe the proposed cropping system. Show how the crop rotation and management will be coordinated with the design of the land application system. Include any supplemental fertilization program, soil testing and the coordination of tillage practices, planting and harvesting schedules and timing of land application.

SEWAGE SLUDGE APPLICATION AGREEMENT

This sewage sludge application agreement is made on this date _____ between _____, referred to here as "landowner", and _____, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as _____ ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of sewage sludge on landowner's land in amounts and in a manner authorized by VPDES permit number _____ which is held by the Permittee.

Landowner acknowledges that the appropriate application of sewage sludge will be beneficial in providing fertilizer and soil conditioning to the property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health, the following site restrictions must be adhered to when sewage sludge receives Class B treatment for pathogen reduction:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge;
2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil;
3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil;
4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge;
5. Animals shall not be grazed on the land for 30 days after application of sewage sludge;
6. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the State Water Control Board;
7. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge;
8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
9. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of sewage sludge borne cadmium equal to or exceeding 0.5 kilograms/hectare (0.45 pounds/acre).

Permittee agrees to notify landowner or landowner's designee of the proposed schedule for sewage sludge application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner:	Permittee:
_____	_____
Signature	Signature
_____	_____
Mailing Address	Mailing Address

SECTION D. SURFACE DISPOSAL

Complete this section only if you own or operate a surface disposal site. Provide the information for each active sewage sludge unit.

1. Information on Active Sewage Sludge Units. **N/A**

a. Unit name or number: _____

b. Unit location

i. Street or Route#: _____

County: _____

City or Town: _____ State: _____ Zip: _____

ii. Latitude: _____ Longitude: _____

Method of latitude/longitude determination

_____ USGS map _____ Filed survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

d. Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:

_____ dry metric tons.

e. Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:

_____ dry metric tons.

f. Does the active sewage sludge unit have a liner with a minimum hydraulic conductivity of 1×10^{-7} cm/sec?

_____ Yes _____ No If "Yes", describe the liner or attach a description.

_____

_____

g. Does the active sewage sludge unit have a leachate collection system? _____ Yes _____ No

If "Yes", describe the leachate collection system or attach a description. Also, describe the method used for leachate disposal and provide the numbers of any federal, state or local permits for leachate disposal:

_____

_____

_____

h. If you answered "No" to either f or g, answer the following:
Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site? _____ Yes _____ No If "Yes", provide the actual distance in meters: _____

i. Remaining capacity of active sewage sludge unit, in dry metric tons: _____ dry metric tons

Anticipated closure date for active sewage sludge unit, if known: _____ (MM/DD/YYYY)

Provide with this application a copy of any closure plan developed for this active sewage sludge unit.

2. Sewage Sludge from Other Facilities.

Is sewage sludge sent to this active sewage sludge unit from any facilities other than yours? _____ Yes _____ No

If "Yes", provide the following information for each such facility, attach additional sheets as necessary.

a. Facility name: _____

b. Facility contact: _____

Title: _____

Phone: (_____) _____

c. Mailing address:

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

d. List, on this form or an attachment, the facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the facility's sewage sludge management practices:

Permit Number:	Type of Permit:
_____	_____
_____	_____

e. Which class of pathogen reduction is achieved before sewage sludge leaves the other facility?
_____ Class A _____ Class B _____ Neither or unknown

f. Describe, on this form or on another sheet of paper, any treatment processes used at the other facility to reduce pathogens in sewage sludge: _____

g. Which vector attraction reduction option is achieved before sewage sludge leaves the other facility?

_____ Option 1 (Minimum 38 percent reduction in volatile solids)
_____ Option 2 (Anaerobic process, with bench-scale demonstration)
_____ Option 3 (Aerobic process, with bench-scale demonstration)
_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
_____ Option 5 (Aerobic processes plus raised temperature)
_____ Option 6 (Raise pH to 12 and retain at 11.5)
_____ Option 7 (75 percent solids with no unstabilized solids)
_____ Option 8 (90 percent solids with unstabilized solids)
_____ None or unknown

h. Describe, on this form or another sheet of paper, any treatment processes used at the other facility to reduce vector attraction properties of sewage sludge: _____

i. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities performed by the other facility that are not identified in e - h above: _____

3. Vector Attraction Reduction.

a. Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?

_____ Option 9 (Injection below land surface)
_____ Option 10 (Incorporation into soil within 6 hours)
_____ Option 11 (Covering active sewage sludge unit daily)

b. Describe, on this form or another sheet of paper, any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge: _____

4. Ground Water Monitoring.

a. Is ground water monitoring currently conducted at this active sewage sludge unit or are ground water monitoring data otherwise available for this active sewage sludge unit? _____ Yes _____ No

If "Yes", provide a copy of available ground water monitoring data. Also provide a written description of the well locations, the approximate depth to ground water, and the ground water monitoring procedures used to obtain these

data.

b. Has a ground water monitoring program been prepared for this active sewage sludge unit?
_____ Yes _____ No If "Yes", submit a copy of the ground water monitoring program with this application.

c. Have you obtained a certification from a qualified ground water scientist that the aquifer below the active sewage sludge unit has not been contaminated? _____ Yes _____ No

If "Yes", submit a copy of the certification with this application.

5. Site-Specific Limits.

Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?
_____ Yes _____ No If "Yes", submit information to support the request for site-specific pollutant limits with this application.

Recyc Systems, Inc

Permit List

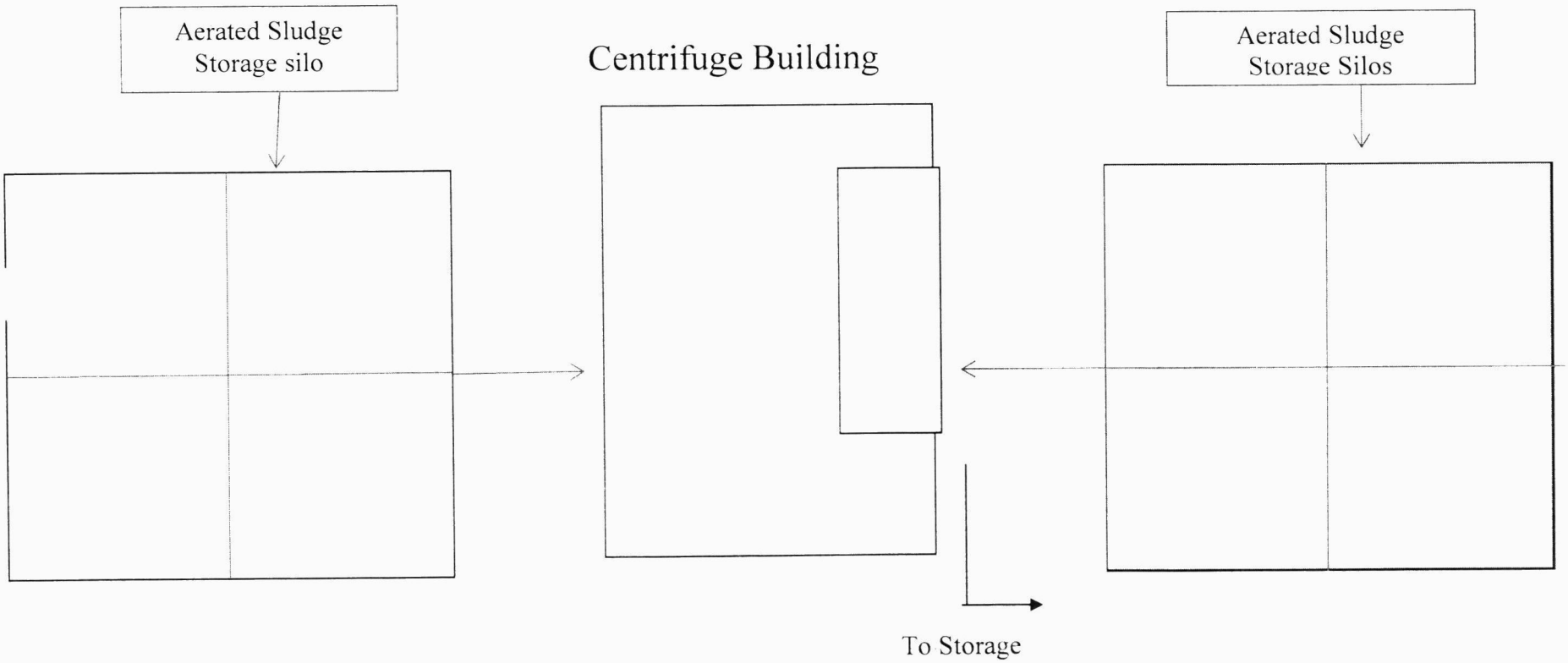
December 31, 2014

	Gross Acres	Sites	Acres per Site	Average Acre in Field	Permitted Date	Expiration Date	Permit Number
ALBEMARLE	7,231.40	46	157.20	24.27	07/30/09	07/30/19	VPA 01574
AMELIA	2,292.81	10	229.28	19.11	07/14/09	07/13/19	VPA 00811
AUGUSTA	4,936.20	14	352.59	20.85	02/01/12	01/31/22	VPA 01583
BRUNSWICK	3,359.50	36	93.32	15.34	06/25/13	06/25/23	VPA 00842
CAROLINE	7,459.03	34	219.38	23.83	02/18/10	02/17/20	VPA 00056
CLARKE	654.10	5	130.82	19.24	07/30/09	07/30/19	VPA 01572
CULPEPER	25,158.30	99	254.12	25.64	04/14/10	04/13/20	VPA 00057
DINWIDDIE	8,568.10	74	115.79	18.38	08/24/10	08/23/10	VPA 00817
ESSEX	1,502.90	6	250.48	27.33	07/27/09	07/26/19	VPA 00804
FAUQUIER	10,205.90	68	150.09	21.22	06/25/10	06/24/20	VPA 00054
FLUVANNA	450.50	5	90.10	23.71	05/01/11	04/30/21	VPA 01582
GREENE	3,349.50	30	111.65	19.36	08/20/09	08/20/19	VPA 01577
HANOVER	5,332.10	30	177.74	22.59	07/27/09	07/26/19	VPA 00801
KING & QUEEN	4,772.80	28	170.46	27.91	07/14/09	07/13/19	VPA 00805
KING WILLIAM	327.10	2	163.55	36.34	10/28/11	10/27/21	VPA 00826
LANCASTER	2,065.80	15	137.72	25.82	10/28/09	10/27/19	VPA 00814
LOUISA	777.80	4	194.45	32.41	01/26/12	01/25/22	VPA 00070
LUNENBURG	11,832.02	49	241.47		05/10/10	05/09/20	VPA 03010
NEW KENT	857.40	3	285.80	34.30	07/14/09	07/13/19	VPA 00800
NORTHUMBERLAND	507.10	3	169.03	19.50	03/31/10	03/30/20	VPA 00816
NOTTOWAY	6,853.50	61	112.35	17.66	10/19/09	10/18/19	VPA 03003
MADISON	6,936.60	34	204.02	23.82	09/08/11	09/07/21	VPA 00061
MIDDLESEX	3,350.00	14	239.29	25.38	03/25/11	03/24/21	VPA 00820
ORANGE	11,932.70	71	168.07	22.41	09/22/10	09/21/20	VPA 00060
PRINCE GEORGE	541.70	5	108.34	23.55	07/14/09	07/13/19	VPA 00809
RICHMOND	1,117.10	8	139.64	19.60	07/27/10	07/26/20	VPA 00821
SHENANDOAH	626.50	2	313.25	34.81	10/01/10	09/30/09	VPA 01579
SOUTHAMPTON	1,938.52	9	215.39	32.86	09/11/09	09/10/19	VPA 01078
SPOTSYLVANIA	2,746.50	26	105.63	19.48	09/22/10	09/21/20	VPA 00058
SURRY	774.60	6	129.10	22.78	08/24/10	08/23/20	VPA 00818
SUSSEX	2,049.20	8	256.15	26.27	02/14/12	02/13/22	VPA 00827
WARREN	1,366.90	12	113.91	23.69	08/07/09	08/07/19	VPA 01573
WESTMORELAND	2,600.00	15	173.33	20.16	10/12/10	10/11/20	VPA 00823
TOTAL	144,474.18	786					

Sludge Treatment Schematic For LFRWWTF

The sludge is aerobically treated in the aerated sludge storage silos, dried in the Centrifuge and transported to the sludge storage. The sludge is then taken from the sludge storage periodically and land applied.

Little Falls Run has a certificate to operate at a rate of 8.0 MGD and produces approximately 5,500 wet tons of biosolids per year.



NOTICE AND NECESSARY INFORMATION (NANI)

This form is to assist in complying with the bulk sewage sludge (biosolids) notification requirements [503.12(f)]. Please note, however, that if the biosolids meet the exceptional quality criteria, then the notification requirements do not apply. This form can be used by preparers of biosolids to transmit information to land appliers and also by land appliers to transmit information to land owners or lease holders.

Facility and Biosolids Type: Little Falls Run WWTF Sewage Sludge

Monitoring Period: From 01 / 01 /2014 To 03/ /31 /2014

To be Completed by PREPARERS of Biosolids

A. Please provide pollutant concentrations

Name	Concentration (mg/kg) Dry Weight	Pollutant Concentrations (Table 3, 40 CFR 503.13) (monthly average)	Ceiling Concentrations* (Table 1, 40 CFR 503.13) (daily maximum)
Arsenic	5.0	41 mg/kg	75 mg/kg
Cadmium	< 2.0	39 mg/kg	85 mg/kg
Copper	300	1500 mg/kg	4300 mg/kg
Lead	20	300 mg/kg	840 mg/kg
Mercury	0.4	17 mg/kg	57 mg/kg
Molybdenum	6	N/A**	75 mg/kg
Nickel	22	420 mg/kg	420 mg/kg
Selenium	< 5.0	100 mg/kg	100 mg/kg
Zinc	635	2800 mg/kg	7500 mg/kg
Nitrogen Concentration	59300	N/A	N/A

* Biosolids may not be land applied if any pollutant exceeds these values.
** EPA has temporarily removed the molybdenum limits from Table 3, Table 2, and Table 4.

B. Pathogen Reduction (40 CFR 503.32) -- Please indicate the level achieved and alternative used
____ Class A _X___ Class B

Pathogen reduction alternative used: ___Alternative 1 (Sludge Fecals)_____

C. Vector Attraction Reduction (40 CFR 503.33) -- Please indicate the option performed
____ Option 1 ____ Option 2 ____ Option 3 _X___ Option 4

____ Option 5 ____ Option 6 ____ Option 7 ____ Option 8

____ No vector attraction reduction options were performed

D. CERTIFICATION
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name and Official Title *(type or print)*	B. Area Code and Telephone Number
Janet Spencer, Deputy Director of Utilities Operations	(540) 658 8620
C. Signature	D. Date Signed
Janet Lynn Spencer	4/17/2014

Updated 12/16/99
NANI1.wpd

NOTICE AND NECESSARY INFORMATION (NANI)

This form is to assist in complying with the bulk sewage sludge (biosolids) notification requirements [503.12(f)]. Please note, however, that if the biosolids meet the exceptional quality criteria, then the notification requirements do not apply. This form can be used by preparers of biosolids to transmit information to land appliers and also by land appliers to transmit information to land owners or lease holders.

Facility and Biosolids Type: Little Falls Run WWTF Sewage Sludge

Monitoring Period: From 04 / 01 /2014 To 06/ 30 /2014

To be Completed by PREPARERS of Biosolids

A. Please provide pollutant concentrations

Name	Concentration (mg/kg) Dry Weight	Pollutant Concentrations (Table 3, 40 CFR 503.13) (monthly average)	Ceiling Concentrations* (Table 1, 40 CFR 503.13) (daily maximum)
Arsenic	4.0	41 mg/kg	75 mg/kg
Cadmium	2.0	39 mg/kg	85 mg/kg
Copper	382	1500 mg/kg	4300 mg/kg
Lead	20	300 mg/kg	840 mg/kg
Mercury	0.5	17 mg/kg	57 mg/kg
Molybdenum	5	N/A**	75 mg/kg
Nickel	34	420 mg/kg	420 mg/kg
Selenium	< 5.0	100 mg/kg	100 mg/kg
Zinc	714	2800 mg/kg	7500 mg/kg
Nitrogen Concentration	43000	N/A	N/A

* Biosolids may not be land applied if any pollutant exceeds these values.
** EPA has temporarily removed the molybdenum limits from Table 3, Table 2, and Table 4.

B. Pathogen Reduction (40 CFR 503.32) -- Please indicate the level achieved and alternative used
____ Class A _X___ Class B

Pathogen reduction alternative used: ___Alternative 1 (Sludge Fecals)_____

C. Vector Attraction Reduction (40 CFR 503.33) -- Please indicate the option performed
____ Option 1 ____ Option 2 ____ Option 3 _X___ Option 4

____ Option 5 ____ Option 6 ____ Option 7 ____ Option 8

____ No vector attraction reduction options were performed

D. CERTIFICATION
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name and Official Title *(type or print)*	B. Area Code and Telephone Number
Janet Spencer, Deputy Director of Utilities Operations	(540) 658 8620
C. Signature	D. Date Signed
J Spencer	7/9/2014

Updated 12/16/99
NANI1.wpd

NOTICE AND NECESSARY INFORMATION (NANI)

This form is to assist in complying with the bulk sewage sludge (biosolids) notification requirements [503.12(f)]. Please note, however, that if the biosolids meet the exceptional quality criteria, then the notification requirements do not apply. This form can be used by preparers of biosolids to transmit information to land appliers and also by land appliers to transmit information to land owners or lease holders.

Facility and Biosolids Type: Little Falls Run WWTF Sewage Sludge

Monitoring Period: From 07 / 01 /2014 To 09/ /30 /2014

To be Completed by PREPARERS of Biosolids

A. Please provide pollutant concentrations

Name	Concentration (mg/kg) Dry Weight	Pollutant Concentrations (Table 3, 40 CFR 503.13) (monthly average)	Ceiling Concentrations* (Table 1, 40 CFR 503.13) (daily maximum)
Arsenic	5.0	41 mg/kg	75 mg/kg
Cadmium	2.0	39 mg/kg	85 mg/kg
Copper	439	1500 mg/kg	4300 mg/kg
Lead	23	300 mg/kg	840 mg/kg
Mercury	1.3	17 mg/kg	57 mg/kg
Molybdenum	8	N/A**	75 mg/kg
Nickel	28	420 mg/kg	420 mg/kg
Selenium	< 5.0	100 mg/kg	100 mg/kg
Zinc	829	2800 mg/kg	7500 mg/kg
Nitrogen Concentration	50100	N/A	N/A

* Biosolids may not be land applied if any pollutant exceeds these values.
** EPA has temporarily removed the molybdenum limits from Table 3, Table 2, and Table 4.

B. Pathogen Reduction (40 CFR 503.32) -- Please indicate the level achieved and alternative used
____ Class A _X___ Class B

Pathogen reduction alternative used: ___Alternative 1 (Sludge Fecals)_____

C. Vector Attraction Reduction (40 CFR 503.33) -- Please indicate the option performed
____ Option 1 ____ Option 2 ____ Option 3 _X___ Option 4

____ Option 5 ____ Option 6 ____ Option 7 ____ Option 8

____ No vector attraction reduction options were performed

D. CERTIFICATION
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name and Official Title *(type or print)*	B. Area Code and Telephone Number
Janet Spencer, Deputy Director of Utilities Operations	(540)658 8620
C. Signature	D. Date Signed
	28 October 2014

NOTICE AND NECESSARY INFORMATION

Biosolids notification requirements to comply with 9VAC25-31-530.F – G or 9VAC25-32-313.G – H.

Part I – To be completed by PREPARERS of biosolids and provided to the person who applies or receives those biosolids

Facility Name: Little Falls Run WWTF Permit Number: VA0076392

A. Metals Limitations
Sample Date(s): 11-4-2014 Number of Samples: 1

Parameters	Concentrations		PC/CPLR Limitations	Ceiling Limitations [2]
	Monthly Average (mg/kg) [1]	Maximum (mg/kg) [1]	Monthly Average (mg/kg) [1]	Maximum (mg/kg) [1]
Total Arsenic	5.0	5.0	41	75
Total Cadmium	2.0	2.0	39	85
Total Copper	446	446	1,500	4,300
Total Lead	20	20	300	840
Total Mercury	0.7	0.7	17	57
Total Molybdenum	7	7	NL [3]	75
Total Nickel	32	32	420	420
Total Selenium	6.0	6.0	100	100
Total Zinc	947	947	2,800	7,500

(1) Values to be reported on a dry weight basis.
(2) Sludge may not be land applied if any pollutant exceeds these values.
(3) The monthly average concentration for molybdenum is currently under study by USEPA. Research suggests that a monthly average molybdenum concentration below 40 mg/kg may be appropriate to reduce the risk of copper deficiency in grazing animals.

B. Class B Pathogen Reduction

Class B biosolids pathogen reduction requirements were achieved in accordance with 9VAC25-31-710.B or 9VAC25-32-675.B by:

☒ Alternative 1: Fecal coliform testing -geometric mean of 7 samples
☐ Alternative 2: Process to Significantly Reduce Pathogens (PSRP) - if selected, indicate process below:
- ☐ Option 1 - Aerobic digestion
- ☐ Option 2 - Air drying beds
- ☐ Option 3 - Anaerobic digestion
- ☐ Option 4 - Composting
- ☐ Option 5 - Lime Stabilization
- ☐ Other: _____

NOTICE AND NECESSARY INFORMATION

C. Vector Attraction Reduction (VAR)

☒ VAR requirements for Class B biosolids were achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8 by:

- ☐ Option 1: ≥ 38% volatile solids reduction
- ☐ Option 2: Anaerobic 40 day bench test
- ☐ Option 3: Aerobic 30 day bench test
- ☒ Option 4: Specific Oxygen Uptake Rate (SOUR) test
- ☐ Option 5: Aerobic process, 14 days @ 40°C (45°C)
- ☐ Option 6: Alkaline stabilization
- ☐ Option 7: Dry to ≥ 75% T.S. w/no unstabilized 1° sludges
- ☐ Option 8: Dry to ≥ 90% T.S.

OR

☐ VAR requirements for Class B biosolids were **not** achieved in accordance with 9VAC25-31-720.B.1 – 8 or 9VAC25-32-685.B.1 – 8; therefore, Option 9 (Injection) or Option 10 (Incorporation) is required at the land application site.

D. Nutrient Concentrations

Sample Date(s): 11-4-2014 Number of Samples: 1

Parameters	Concentrations	
	Monthly Average (mg/kg) [1]	Maximum (mg/kg) [1]
Total Nitrogen as N	61,600	61,600
Total Phosphorus as P	33,400	33,400

*Values to be reported on a dry weight basis.

E. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title Janet Spencer, Deputy Director

Signature JSpencer Date Signed 1/6/2015

Telephone number (540) 658 8620

VPDES PERMIT APPLICATION ADDENDUM

1. **Entity to whom the permit is to be issued:** Stafford County Board of Supervisors

   Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** No

3. **Please provide the tax map parcel number for the land where the discharge is located:** 59S-72C

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?** None

5. **What is the design average flow of this facility in million gallons per day (MGD)?** 8.0 **(MGD) For industrial facilities, provide the maximum 30-day average production level, include units:** _____

6. **In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels?** **Yes**
   If yes, please identify the other flow tiers in MGD: 8/13
   Please consider the following as you answer the questions in #5 above for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

7. **Nature of operations generating wastewater:** Residential and Commercial sources and one categorical industry (metal finishing Part 433)

   90 % of flow from domestic connections/sources

   Number of private residences to be served by the treatment works: _____

   10 % of flow from non-domestic connections/sources

8. **Mode of discharge:** X Continuous _____ Intermittent _____ Seasonal

   Describe frequency and duration of intermittent and seasonal discharges: N/A

9. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point(s):**

Stream Characteristic	**Outfall Number**						
	001						
Permanent stream, never dry	X						
Intermittent stream, usually flowing, sometimes dry							
Ephemeral stream, wet-weather flow, often dry							
Effluent-dependent stream, usually or always dry							
Lake or pond at or below discharge point							
Other:							

10. **Approval date(s), if applicable:**

O & M Manual September 24,2003 **Sludge/Solids Management Plan** June 11,1998

Have there been changes in your operation or procedures since the above approval dates? Yes Revisions and updates 03/2011

11. **Privately Owned Treatment Works:** If this application is for a privately owned treatment works serving, or designed to serve, 50 or more residences, you must include with your application notification from the State Corporation Commission that you are incorporated in the Commonwealth and verification from the SCC that you are in compliance with all regulations and relevant orders of the State Corporation Commission. Incorporated also includes Limited Liability Companies (LLCs), Limited Partnerships (LPs) and certificates of authority.

12. **Please provide a list of Materials stored at the facility. Please complete the table below or attach another page if more room is necessary.**

Material Storage		
Materials Description	Volume Stored	Spill/Stormwater Prevention Measures
Aluminum Sulfate	6000 gal	Spill kit/ drains to head of facility
Magnesium Hydroxide	5000 gal	Spill kit
Polydyne Polymer	1000 gal	Spill kit drains to head of facility
Diesel fuel	8000 gal	Double wall tank/ spill kit

13. **Please provide the name and email addresses for personnel who will be involved with the reissuance of the VPDES permit:**

Name	Title	E-mail Address
Michael Smith	Director of Utilities	MSmith@staffordcountyva.gov
Janet Spencer	Deputy Director of Utilities	JSpencer@staffordcountyva.gov
Brian Green	Facility Manager	BGreen@staffordcountyva.gov

14. **Consent to receive Electronic Mail**

The Department of Environmental Quality (DEQ) may deliver permits and certifications (this includes permit issuances, reissuances, modifications, revocation and reissuances, terminations and denials) to recipients, including applicants or permittees, by electronically certified mail where the recipients notify DEQ of their consent to receive mail electronically (§ 10.1-1183). Check *only one* of the following to consent to or decline receipt of electronic mail from DEQ as follows:

X Applicant or permittee agrees to receive by electronic mail the permit that may be issued for the proposed pollutant management activity, and to certify receipt of such electronic mail when requested by the DEQ.

If yes, provide email: MSmith@staffordcountyva.gov

☐ Applicant or permittee declines to receive by electronic mail the permit that may be issued for the proposed pollutant management activity.

Westernik, Anna (DEQ)

From: Brian Green [BGreen@staffordcountyva.gov]
Sent: Wednesday, March 18, 2015 8:22 AM
To: Westernik, Anna (DEQ)
Subject: RE: DEQ Comments regarding the permit application received on February 18, 2015

Good Morning Anna

Sorry it has taken awhile to get back to you on this but I needed to clarify our landfill solids disposal option.

1. 2 A Parts A.12 Data was collected from Jan 2012 to April 2014
2. 2A Parts B.6 Data From July 2014
3. QL for cBOD5 is 5.0
4. Landfill bio solids disposal is not an option for us. We have never been permitted to dispose at the landfill. Our sludge management plan only allows for land application with Recyc Systems handling our current contract.

If you need any further information please let me know. Thanks!

Brian Green
Plant Manager
Little Falls Run WWTF
Stafford County
(540)658-5120
bgreen@co.stafford.va.us

From: Westernik, Anna (DEQ) [mailto:Anna.Westernik@deq.virginia.gov]
Sent: Thursday, March 05, 2015 11:16 AM
To: Brian Green
Cc: Janet L. Spencer
Subject: DEQ Comments regarding the permit application received on February 18, 2015

Good Morning,

DEQ-NRO has reviewed the permit application received on February 18, 2015 and has the following comments:

1. In EPA Form 2A, Parts A.12 and B.6, please indicate the time period in which the samples were taken.

2. Please indicate the QL used for $cBOD_5$ analysis.

3. Should the facility contact for the treatment plant be Brian Green, Janet Spencer, or Michael Smith?

4. If landfill disposal is used as a backup for biosolids removal, it should be indicated on the VPDES Sewage Sludge Permit Application Form.

Could you please respond by March 23, 2014?

Thanks,

Anna

HRSD
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1432 Air Rail Avenue, Virginia Beach, VA 23455-3002 • 757.460.4205 • Fax: 757.460.6586 • www.hrsd.com

04/25/12 - Stafford County - Little Falls - Permit Application

This analytical report contains 11 pages

Hugh Jones
Laboratory Supervisor
County of Stafford
950 Kings Highway
Fredericksburg, VA 22405

hjones@co.stafford.va.us

Date Sent: 05/14/12

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: March 23, 2012
Expiration Date: June 14, 2012
Certificate # 1465

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Total Metals							
Chromium	EPA 200.8	ug/L	<5.0	5.0	KWILLI	05/03/12	11:03
Selenium	EPA 200.8	ug/L	<2.0	2.0	KWILLI	05/03/12	11:03
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	KWILLI	05/03/12	10:57
Arsenic	EPA 200.8	ug/L	<20	20	KWILLI	05/03/12	10:57
Beryllium	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	10:57
Cadmium	EPA 200.8	ug/L	<0.1	0.1	KWILLI	05/03/12	10:57
Chromium III (measured as Total Chromium)		ug/L	<5.0	5.0	KWILLI	05/03/12	11:03
Chromium VI (measured as Total Chromium)		ug/L	<5.0	5.0	KWILLI	05/03/12	11:03
Copper	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	10:57
Lead	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	10:57
Mercury	EPA 245.7	ng/L	<10.0	10.0	SLABOC	05/01/12	10:51
Nickel	EPA 200.8	ug/L	<2.0	2.00	KWILLI	05/03/12	10:57
Silver	EPA 200.8	ug/L	<0.1	0.10	KWILLI	05/03/12	10:57
Thallium	EPA 200.8	ug/L	<0.1	0.10	KWILLI	05/03/12	10:57
Zinc	EPA 200.8	ug/L	<10.0	10.0	KWILLI	05/03/12	10:57
Volatile Organics							
Acrolein	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Benzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Bromoform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Carbon Tetrachloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Chlorodibromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Chloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
2-Chloro-ethylvinyl Ether	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Chloroform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Dichlorobromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics cont.							
1,2 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,3 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,4 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,2-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,2-trans-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,2-Dichloropropane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<20.0	20.0	SLOPEZ	04/26/12	16:24
Ethylbenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Methyl Bromide	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Methyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Tetrachloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Toluene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1,1-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1,2-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Vinyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables							
p-Chloro-m-cresol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2-Nitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
4-Nitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Phenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Acenapthylene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/08/12	17:42
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzo(GHI)Perylene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
4-Bromophenyl Phenyl Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
4-Chlorophenyl phenyl ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Chrysene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Di-n-octyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Dimethyl Phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,6-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
1,2-Diphenylhydrazine[2]	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Fluorene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Isophorone	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Naphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Phenanthrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 5/14/12

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Miscellaneous Parameters							
Free Cyanide	ASTM D 4282	ug/L	<10	10	AMOORE	04/26/12	08:05
Oil and Grease HEM	EPA 1664A	mg/L	<5.0	5.0	JRICKS	05/01/12	7:30
Total Dissolved Solids	SM 2540C	mg/L	347	1.0	MGRIBB	04/26/12	14:09
Total Phenol	LACH 10-210-00-1-B	mg/L	<0.05	0.05	AMOORE	05/04/12	11:06
Hardness (as $CaCO_3$)	SM2340B	mg eq $CaCO_3$/L	132	0.20	SWILLI	05/03/12	12:18
Total Metals							
Chromium	EPA 200.8	ug/L	<5.0	5.0	KWILLI	05/03/12	11:42
Selenium	EPA 200.8	ug/L	<2.0	2.0	KWILLI	05/03/12	11:42
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	KWILLI	05/03/12	11:08
Arsenic	EPA 200.8	ug/L	<20	20	KWILLI	05/03/12	11:08
Beryllium	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	11:08
Cadmium	EPA 200.8	ug/L	<0.1	0.1	KWILLI	05/03/12	11:08
Chromium III (measured as Total Chromium)		ug/L	<5.0	5.0	KWILLI	05/03/12	11:42
Chromium VI (measured as Total Chromium)		ug/L	<5.0	5.0	KWILLI	05/03/12	11:42
Copper	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	11:08
Lead	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	11:08
Mercury	EPA 245.7	ng/L	<10.0	10.0	SLABOC	05/01/12	10:58
Nickel	EPA 200.8	ug/L	5.6	2.0	KWILLI	05/03/12	11:08
Silver	EPA 200.8	ug/L	<0.1	0.10	KWILLI	05/03/12	11:08
Thallium	EPA 200.8	ug/L	<0.1	0.10	KWILLI	05/03/12	11:08
Zinc	EPA 200.8	ug/L	38.4	10.0	KWILLI	05/03/12	11:08

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics							
Acrolein	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Benzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Bromoform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Carbon Tetrachloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Chlorodibromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Chloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
2-Chloro-ethylvinyl Ether	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Chloroform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Dichlorobromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,2 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,3 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,4 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,2-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,2-trans-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,2-Dichloropropane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<20.0	20.0	SLOPEZ	04/26/12	19:22
Ethylbenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Methyl Bromide	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Methyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Tetrachloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Toluene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1,1-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1,2-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Vinyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables							
p-Chloro-m-cresol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2-Nitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
4-Nitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Phenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Acenapthylene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/08/12	19:58
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzo(GHI)Perylene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
4-Bromophenyl Phenyl Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
4-Chlorophenyl phenyl ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Chrysene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Di-n-octyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Dimethyl Phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,6-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
1,2-Diphenylhydrazine[2]	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Fluorene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Isophorone	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Naphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Phenanthrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

Authorization: Robin Parnell **Date:** 5/14/12

Lab Manager / **QA Manager**

CENTRAL ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REPORT
Level 1

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Project: Stafford County - Little Falls WWTF - Permit Application
Project Code: Final Effluent
Sample Point: FB; FNE
Sample Date: 04/25/12

Analytical Run Information	Sb	As	Be	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Tl	Zn
Method	200.8	200.8	200.8	200.8	200.8	200.8	200.8	245.7	200.8	200.8	200.8	200.8	200.8
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L
Limit of Detection (LOD)	0.22	0.06	0.01	0.006	0.04	0.09	0.01	1.1	0.08	0.12	0.05	0.03	0.24
Limit of Quantitation (LOQ)	20.0	20.0	1.0	0.1	5.0	1.0	1.0	10.0	2.0	2.0	0.10	0.10	10.0
Method Blank (MB)	<0.22	<0.06	<0.01	<0.006	<0.04	<0.09	*0.02	<1.1	<0.08	<0.12	<0.05	<0.03	<0.24

Total Metals	Cr	Se
Sample ID: ST_LF FNE TOTAL		
Matrix Spike Conc.	10.0	10.0
MS Percent Recovery	95%	97%
MSD Percent Recovery	91%	91%
MS/MSD RPD	4	7

Dissolved Metals	Sb	As	Be	Cd	Cu	Pb	Hg	Ni	Ag	Tl	Zn
Sample ID: ST_LF FNE DS											
Matrix Spike Conc.	50.0	50.0	5.0	1.0	10.0	5.0	20.0	10.0	5.0	1.0	50.0
MS Percent Recovery	97%	98%	91%	94%	86%	97%	99%	84%	88%	97%	82%
MSD Percent Recovery	96%	96%	91%	90%	88%	96%	102%	88%	87%	100%	86%
MS/MSD RPD	1	2	1	4	2	1	3	3	2	3	2

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
*Report Limit is lowest concentration at which quantitation is demonstrated. Values below Report Limit should not be used for compliance determinations due to a high degree of uncertainty.

Validated By: _____ Date: 05/01/12

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CENTRAL ENVIRONMENTAL LABORATORY
1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455
TEL: 757-460-4214
FAX: 757-460-6586

CHAIN OF CUSTODY

PROJECT NAME/CODE: Little Falls VPDES 2A

ANALYSES REQUESTED, CON & NUMBER OF CONTAINERS

Project in Lims? Yes ____ No ✓

HRSD Use Only

CUSTOMER SAMPLE ID	HRSD Use Only: PROJECT CODE	HRSD Use Only: SAMPLE POINT	DATE	TIME	SAMPLED BY	Circle One: MATRIX	Circle One: SAMPLE TYPE	TOTAL METALS (5)	DISSOLVED METALS (5S)	Hg Diss 245.7 (5G)	Semi Vol (9-9b)	Semi Vol (9-9h)	TDS (1)	VOA (10-10b)	VOA (10-10o)	Total Phenol (3)	Oil & Grease (8-8c)	Free Cyanide (6A)					HRSD Use Only: Presv'd Checked	HRSD Use Only: CONT. COUNT
Field Blank	ST_LF	FB	4/25/2012	1058	MW	L	C	1	1	1	3												✓	6
Field Blank	ST_LF	FB	4/25/2012	1025	MW	L	G							3									✓	3
Final Effluent	ST_LF	FNE	4/25/2012	1058	MW	L	C	1	1	1		9	1										✓	13
Final Effluent	ST_LF	FNE	4/25/2012	1025	MW	L	G								6								✓	6
Final Effluent	ST_LF	FNE	4/25/2012	1030	MW	L	G									1							✓	1
Final Effluent	ST_LF	FNE	4/25/2012	1040	MW	L	G										4						✓	4
Final Effluent	ST_LF	FNE	4/25/2012	1030	MW	L	G											1					✓	1

COMMENTS:

For Ground Water Use Only
Temp. Blank 1 ____ °C
Temp. Blank 2 ____ °C

Relinquished by / Signature	Date/Time 04/26/12 0824
Received by / Signature	Date/Time 4/26/12 0824
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time

Temp. Requirement

Where required, submitted samples were transported in coolers maintained at ≤ 6 °C.

Yes ✓ No ____

Int MW

***Preservatives**

- *Hg, Metals (pH<2 - HNO3) (Clean metals check in section)
- *O&G (pH<2 - HCl, check in section) & store ≤ 6 °C
- CN (pH>12 - NaOH) & store ≤ 6 °C
- *Sulfide (pH>9 - NaOH+ZnAc) & store ≤ 6 °C
- *Micro ($Na_2S_2O_3$ + EDTA) & store < 10 °C
- *COD, NUT, Phenols (pH<2 - H_2SO_4) & store ≤ 6 °C
- *TOC (pH<2 - H_3PO_4) & store ≤ 6 °C
- *BOD, TSS, TVSS, Turbidity, Surfactant, Sulfate store ≤ 6 °C
- *NUT Non Acidified, Conductivity, Organics store ≤ 6 °C
- *Cr (VI) (pH 9.3 - 9.7 - $(NH_4)_2SO_4$) & store ≤ 6 °C

All sample(s) met proper *preservation requirements. Yes ✓ No ____ Int 6/4/1

Sample Type: C=Composite, G=Grab Matrix: L= Liquid , S = Solid CGN: Container Group Number

NOTE: ALL APPLICABLE INFORMATION MUST BE COMPLETED PRIOR TO ACCEPTANCE.

FIELD RECORD (S)

Little Falls VPDES Field Sheet

Information To Be Checked Before The Start of Each Sampling Event

1. Does the Final Effluent have any abnormal characteristics (odor, color)? Y / (N)

If the answer to the above questions is NO proceed to the next section. Please contact a supervisor if the answer is YES.

2. A. Average Plant flow for the last five days: 3.28 MGD
   B. Expected Plant flow for the next 24 hours: ~4 MGD

3. List the last three days of Final Effluent TSS with the most recent last: 1.5 mg/L, 1.8 mg/L, 0.5 mg/L

4. Contact Closure: (Expected Flow 4 MGD / 10000 / 30) 13 Pulses per sample. 16.52

5. Samplers for Final Effluent & FB calibrated at 550 ml per sample. (Desired volume/30)
   Final Effluent Start Time / Date: 1058 042412 Calibrated to: 550 mL
   FB Start Time / Date: 1058 042412 Calibrated to: 550 mL

The above information has been completed prior to the beginning of the sampling event. Int. MW

Sampling personnel: M. Wiggins, R. Hunt, _____

Information Check At The End Of The Sampling Event

1. Are all lids, compression assemblies and caps secure? (Y) / N

2. Final Effluent TSS for the sampling period: 1.1 mg/L (4/24), 1.1 mg/L (4/25)

3. Plant flow for the sampling period 3.107 MGD (4/24), 2.871 MGD (4/25)

4. Number of samples collected in each Final Effluent & FB composite container:
   Final Effluent: 23
   FB: 23

5. Final Effluent & FB composite end time and date:
   Final Effluent End Time / Date: 1058 / 042512
   FB End Time / Date: 1058 / 042512

6. Is Temperature in collection container at the end of sampling <6° C? (Y) / N

7. Are sample volumes equal in all composite containers? (Y) / N

8. Grab times and dates:
   FB VOA: 1025 / 042512
   Oil & Grease: 1040 / 042512
   Total Phenol: 1030 / 042512
   FNE VOA: 1025 / 042512
   Free Cyanide: 1030 / 042512

Sampling personnel: M. Wiggins, R. Hunt, _____

Please contact project lead with any problems incurred during the sampling event.

Record any other information that could affect sample results:

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04/24/13 - Stafford County - Little Falls - Permit Application

This analytical report contains 11 pages

Hugh Jones
Laboratory Supervisor
County of Stafford
950 Kings Highway
Fredericksburg, VA 22405

hjones@co.stafford.va.us

Date Sent: 05/22/13

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: June 15, 2012
Expiration Date: June 14, 2013
Certificate # 1612

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Total Metals							
Chromium	EPA 200.8	ug/L	<5.0	5.0	KWILLI	05/02/13	13:39
Selenium	EPA 200.8	ug/L	<2.0	2.0	KWILLI	05/02/13	13:39
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	KWILLI	05/02/13	13:32
Arsenic	EPA 200.8	ug/L	<20	20	KWILLI	05/02/13	13:32
Beryllium	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	13:32
Cadmium	EPA 200.8	ug/L	<0.1	0.1	KWILLI	05/02/13	13:32
Chromium III (measured as Total Chromium)		ug/L		5.0			
Chromium VI (measured as Total Chromium)		ug/L		5.0			
Copper	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	13:32
Lead	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	13:32
Nickel	EPA 200.8	ug/L	<2.00	2.00	KWILLI	05/02/13	13:32
Silver	EPA 200.8	ug/L	<0.10	0.10	KWILLI	05/02/13	13:32
Thallium	EPA 200.8	ug/L	<0.10	0.10	KWILLI	05/02/13	13:32
Zinc	EPA 200.8	ug/L	<10.0	10.0	KWILLI	05/02/13	13:32
Volatile Organics							
Acrolein	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/27/13	04:01
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/27/13	04:01
Benzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Bromoform	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Carbon Tetrachloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Chlorodibromomethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Chloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
2-Chloro-ethylvinyl Ether	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Chloroform	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Dichlorobromomethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics cont.							
1,2 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,3 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,4 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1-Dichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,2-Dichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1-Dichloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,2-trans-Dichloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,2-Dichloropropane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<10.0	10.00	SLOPEZ	04/27/13	04:01
Ethylbenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Methyl Bromide	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Methyl Chloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Tetrachloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Toluene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1,1-Trichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1,2-Trichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Vinyl Chloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables •							
p-Chloro-m-cresol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2-Nitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
4-Nitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Phenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Acenapthylene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(GHI)Perylene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
4-Bromophenyl Phenyl Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
4-Chlorophenyl phenyl ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Chrysene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Di-n-octyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

•*-Acid surrogate recoveries were below the acceptable limits due to possible analytical procedural error. However, the recoveries of these surrogates were within acceptable limits in Method Blank, Laboratory Control Sample and FNE sample. The percent recovery of the sample matrix spike and matrix duplicate were also within acceptable limits.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Dimethyl Phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,6-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
1,2-Diphenylhydrazine[2]	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Fluorene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Isophorone	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Naphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Phenanthrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 5/22/13

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Miscellaneous Parameters							
Free Cyanide	ASTM D 4282	ug/L	<10	10	AMOORE	05/02/13	07:05
Oil and Grease HEM	EPA 1664A	mg/L	<5.0	5.0	RMORGA	05/01/13	08:00
Total Dissolved Solids	SM 2540C	mg/L	345	1.0	RCASTR	04/25/13	17:38
Total Phenol	LACH 10-210-00-1-B	mg/L	<0.05	0.05	AMOORE	05/16/13	10:16
Hardness (as $CaCO_3$)	SM2340B	mg eq $CaCO_3$/L	117	1.16	SLABOC	05/08/13	09:18
Total Metals							
Chromium	EPA 200.8	ug/L	<5.0	5.0	KWILLI	05/02/13	14:34
Selenium	EPA 200.8	ug/L	<2.0	2.0	KWILLI	05/02/13	14:34
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	KWILLI	05/02/13	14:03
Arsenic	EPA 200.8	ug/L	<20	20	KWILLI	05/02/13	14:03
Beryllium	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	14:03
Cadmium	EPA 200.8	ug/L	<0.1	0.1	KWILLI	05/02/13	14:03
Chromium III (measured as Total Chromium)		ug/L		5.0			
Chromium VI (measured as Total Chromium)		ug/L		5.0			
Copper	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	14:03
Lead	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	14:03
Nickel	EPA 200.8	ug/L	5.9	2.0	KWILLI	05/02/13	14:03
Silver	EPA 200.8	ug/L	<0.10	0.10	KWILLI	05/02/13	14:03
Thallium	EPA 200.8	ug/L	<0.10	0.10	KWILLI	05/02/13	14:15
Zinc	EPA 200.8	ug/L	39.0	10.0	KWILLI	05/02/13	14:03

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics							
Acrolein	EPA 624	ug/L	<50.0	50.0	SLOPEZ	04/27/13	03:31
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/27/13	05:59
Benzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Bromoform	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Carbon Tetrachloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Chlorodibromomethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Chloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
2-Chloro-ethylvinyl Ether	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Chloroform	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Dichlorobromomethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,2 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,3 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,4 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1-Dichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,2-Dichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1-Dichloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,2-trans-Dichloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,2-Dichloropropane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/27/13	05:59
Ethylbenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Methyl Bromide	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Methyl Chloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Tetrachloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Toluene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1,1-Trichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1,2-Trichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Vinyl Chloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables							
p-Chloro-m-cresol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2-Nitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
4-Nitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Phenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Acenapthylene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(GHI)Perylene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
4-Bromophenyl Phenyl Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
4-Chlorophenyl phenyl ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Chrysene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Di-n-octyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Dimethyl Phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,6-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
1,2-Diphenylhydrazine[2]	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Fluorene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Isophorone	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Naphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Phenanthrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 5/22/13

CENTRAL ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REPORT
Level 1

Project: Stafford County - Little Falls WWTF - Permit Application
Project Code: Final Effluent
Sample Point: FB; FNE
Sample Date: 04/24/13

Analytical Run Information	Sb	As	Be	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Tl	Zn
Method	200.8	200.8	200.8	200.8	200.8	200.8	200.8	245.7	200.8	200.8	200.8	200.8	200.8
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L
Limit of Detection (LOD)	0.22	0.06	0.01	0.006	0.04	0.09	0.01	1.1	0.08	0.12	0.05	0.03	0.24
Limit of Quantitation (LOQ)	20.0	20.0	1.0	0.1	5.0	1.0	1.0	10.0	2.0	2.0	0.10	0.10	10.0
Method Blank (MB)	<0.22	<0.06	<0.01	<0.006	<0.04	<0.09	<0.01		<0.08	<0.12	<0.05	<0.03	<0.24
Total Metals					Cr					Se			
Sample ID: ST_LF FNE TOTAL													
Matrix Spike Conc.					10.0					10.0			
MS Percent Recovery					91%					91%			
MSD Percent Recovery					94%					93%			
MS/MSD RPD					3					3			
Dissolved Metals	**Sb**	**As**	**Be**	**Cd**		**Cu**	**Pb**	**Hg**	**Ni**		**Ag**	**Tl**	**Zn**
Sample ID: ST_LF FNE DS													
Matrix Spike Conc.	50.0	50.0	5.0	1.0		10.0	5.0	20.0	10.0		5.0	1.0	50.0
MS Percent Recovery	98%	101%	92%	97%		88%	100%		88%		94%	96%	83%
MSD Percent Recovery	98%	100%	92%	98%		87%	100%		85%		97%	98%	83%
MS/MSD RPD	<1	<1	<1	2		1	<1		2		3	1	<1

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
*Report Limit is lowest concentration at which quantitation is demonstrated. Values below Report Limit should not be used for compliance determinations due to a high degree of uncertainty.

Validated By: _____ Date: 5/17/13

CHAIN OF CUSTODY

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1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455
TEL: 757-460-4214
FAX: 757-460-6586

PROJECT NAME/CODE: Little Falls VPDES 2A

ANALYSES REQUESTED, CGN & NUMBER OF CONTAINERS

Project in Lims? Yes ___ No ✓

CUSTOMER SAMPLE ID	HRSD Use Only: PROJECT CODE	HRSD Use Only: SAMPLE POINT	DATE	TIME	SAMPLED BY	Circle One: MATRIX	Circle One: SAMPLE TYPE	TOTAL METALS (5)	DISSOLVED METALS (5S)	Semi Vol (9-9b)	Semi Vol (9-9h)	TDS (1)	VOA (10-10b)	VOA (10-10e)	Total Phenol (3)	Oil & Grease (8-9c)	Free Cyanide (64)						HRSD Use Only: Pres'd Checked	HRSD Use Only: CONT. COUNT
Field Blank	ST_LF	FB	4/24/2013	1144	MW	L	C	1	1	3													✓	5
Field Blank	ST_LF	FB	4/24/2013	1030	MW	L	G						3										✓	3
Final Effluent	ST_LF	FNE	4/24/2013	1144	MW	L	C	1	1		9	1											✓	12
Final Effluent	ST_LF	FNE	4/24/2013	1030	MW	L	G							6									✓	6
Final Effluent	ST_LF	FNE	4/24/2013	1035	MW	L	G								1								✓	1
Final Effluent	ST_LF	FNE	4/24/2013	1045	MW	L	G									4							✓	4
Final Effluent	ST_LF	FNE	4/24/2013	1035	MW	L	G										1						✓	1

For Ground Water Use Only
Temp. Blank 1: ___ °C
Temp. Blank 2: ___ °C

COMMENTS:

Relinquished by / Signature	Date/Time 04/25/13 0946	Temp. Requirement: Where required, submitted samples were transported in coolers maintained at ≤ 6 °C. Yes ✓ No ___ Int MW
Received by / Signature	Date/Time 4/25/13 0946	
Relinquished by / Signature	Date/Time	
Received by / Signature	Date/Time	
Relinquished by / Signature	Date/Time	
Received by / Signature	Date/Time	
Relinquished by / Signature	Date/Time	
Received by / Signature	Date/Time	

All sample(s) met proper *preservation requirements. Yes ✓ No ___ Int GH

*Preservatives

*Hg, Metals (pH<2 - HNO3) (Clean metals check in section)
*O&G (pH<2 - HCl, check in section) & store ≤ 6 °C
CN^- (pH>12 - NaOH) & store ≤ 6 °C
*Sulfide (pH>9 - NaOH+ZnAc) & store ≤ 6 °C
*Micro ($Na_2S_2O_3$ + EDTA) & store ≤ 10 °C
*COD, NUT, Phenols (pH<2 - H_2SO_4) & store ≤ 6 °C
*TOC (pH<2 - H_3PO_4) & store ≤ 6 °C
*BOD, TSS, TVSS, Turbidity, Surfactant, Sulfate store ≤ 6 °C
*NUT Non Acidified, Conductivity, Organics store ≤ 6 °C
*Cr (VI) (pH 9.3 - 9.7 - $(NH_4)_2SO_4$) & store ≤ 6 °C

Sample Type: C=Composite, G=Grab Matrix: L= Liquid , S = Solid CGN: Container Group Number

NOTE: ALL APPLICABLE INFORMATION MUST BE COMPLETED PRIOR TO ACCEPTANCE.

FIELD RECORD(S)

Little Falls VPDES Field Sheet

Information To Be Checked Before The Start of Each Sampling Event

1. Does the Final Effluent have any abnormal characteristics (odor, color)? Y / (N)

If the answer to the above questions is NO proceed to the next section. Please contact a supervisor if the answer is YES.

2. A. Average Plant flow for the last five days: 3.14 MGD
   B. Expected Plant flow for the next 24 hours: ~3.25 MGD

3. List the last three days of Final Effluent TSS with the most recent last: 2.0 mg/L, 2.2 mg/L, 2.0 mg/L

4. Contact Closure: (Expected Flow 3.25 MGD / 56,000 / 130) ~2 Pulses per sample.

5. Samplers for Final Effluent & FB calibrated at 500 ml per sample. (Desired volume 152 / 30)
   Final Effluent Start Time / Date: 1144 042313 Calibrated to: 500 mL
   FB Start Time / Date: 1144 042313 Calibrated to: 500 mL

The above information has been completed prior to the beginning of the sampling event. Int. HW

Sampling personnel: M. Wiggins, A. Johnson, _____

Information Check At The End Of The Sampling Event

1. Are all lids, compression assemblies and caps secure? (Y) / N 4/23 4/24

2. Final Effluent TSS for the sampling period: 1.7 mg/L (4/23), 1.2 mg/L (4/24)

3. Plant flow for the sampling period 2.946 MGD, 2.873 MGD

4. Number of samples collected in each Final Effluent & FB composite container:
   Final Effluent: 26
   FB: 26

5. Final Effluent & FB composite end time and date:
   Final Effluent End Time / Date: 1144 042413
   FB End Time / Date: 1144 042413

6. Is Temperature in collection container at the end of sampling <6° C? (Y) / N

7. Are sample volumes equal in all composite containers? (Y) / N

8. Grab times and dates:
   FB VOA: 1030 042413
   Oil & Grease: 1045 042413
   Total Phenol: 1035 042413
   FNE VOA: 1030 042413
   Free Cyanide: 1035 042413

Sampling personnel: M. Wiggins, A. Johnson

Please contact project lead with any problems incurred during the sampling event.

Record any other information that could affect sample results:

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07/08/13 - Stafford County - Little Falls - Permit Application - Resample Hg

This analytical report contains 5 pages

Hugh Jones
Laboratory Supervisor
County of Stafford
950 Kings Highway
Fredericksburg, VA 22405

hjones@co.stafford.va.us

Date Sent: 07/24/13

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: June 15, 2013
Expiration Date: June 14, 2014
Certificate # 2354

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 07/08/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Dissolved Metals							
Mercury	EPA 245.7	ng/L	<10.0	10.0	KWILLI	07/17/13	08:51

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 7/22/13

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 07/08/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Dissolved Metals							
Mercury	EPA 245.7	ng/L	<10.0	10.0	KWILLI	07/17/13	09:04

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 7/22/13

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CENTRAL ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REPORT
Level 1

Project: Stafford County - Little Falls WWTF - Permit Application
Project Code: Final Effluent
Sample Point: FB; FNE
Sample Date: 07/08/13

Analytical Run Information	Hg
Method	245.7
Units	ng/L
Limit of Detection (LOD)	1.1
Limit of Quantitation (LOQ)	10.0
Method Blank (MB)	<1.1
Dissolved Metals	
Sample ID: ST_LF FNE DS	
Matrix Spike Conc.	20.0
MS Percent Recovery	97%
MSD Percent Recovery	99%
MS/MSD RPD	1

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference

Validated By: _____

CHAIN OF CUSTODY

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CENTRAL ENVIRONMENTAL LABORATORY
1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455
TEL: 757-460-4214
FAX: 757-460-6586

PROJECT NAME/CODE: Little Falls VPDES 2A

ANALYSES REQUESTED, CGN & NUMBER OF CONTAINERS

Project in Lims? Yes ✓ No ____

CUSTOMER SAMPLE ID	HRSD Use Only: PROJECT CODE	HRSD Use Only: SAMPLE POINT	DATE	TIME	SAMPLED BY	Circle One: MATRIX	Circle One: SAMPLE TYPE	Hg Diss 245.7 (56)														HRSD Use Only: Presv'd Checked	HRSD Use Only: CONT. COUNT
Field Blank	ST_LF	FB	070813	1202	MB	L	C	1 ✓														✓	1
Final Effluent	ST_LF	FNE	070813	1202	MB	L	C	1 ✓														✓	1

COMMENTS:

For Ground Water Use Only
Temp. Blank 1: ____ °C
Temp. Blank 2: ____ °C

Relinquished by / Signature: Molly Boutin	Date/Time: 070913@1550
Received by / Signature: [signature]	Date/Time: 070913@1550
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time

Temp. Requirement

Where required, submitted samples were transported in coolers maintained at ≤ 6 °C.

Yes ✓ No ____

Int MB

***Preservatives**

- *Hg, Metals (pH<2 - HNO3) (Clean metals check in section)
- *O&G (pH<2 - HCl, check in section) & store ≤ 6 °C
- CN^- (pH>12 - NaOH) & store ≤ 6 °C
- *Sulfide (pH>9 - NaOH+ZnAc) & store ≤ 6 °C
- *Micro ($Na_2S_2O_3$ + EDTA) & store < 10 °C
- *COD, NUT, Phenols (pH<2 - H_2SO_4) & store ≤ 6 °C
- *TOC (pH<2 - H_3PO_4) & store ≤ 6 °C
- *BOD, TSS, TVSS, Turbidity, Surfactant, Sulfate store ≤ 6 °C
- *NUT Non Acidified, Conductivity, Organics store ≤ 6 °C
- *Cr (VI) (pH 9.3 - 9.7 - $(NH_4)_2SO_4$) & store ≤ 6 °C

All sample(s) met proper *preservation requirements. Yes ✓ No ____ Int HMorp

Sample Type: C=Composite, G=Grab Matrix: L= Liquid , S = Solid CGN: Container Group Number

NOTE: ALL APPLICABLE INFORMATION MUST BE COMPLETED PRIOR TO ACCEPTANCE.

FIELD RECORD(S)

Little Falls VPDES Field Sheet

Information To Be Checked Before The Start of Each Sampling Event

1. Does the Final Effluent have any abnormal characteristics (odor, color)? Y /(N)

If the answer to the above questions is NO proceed to the next section. Please contact a supervisor if the answer is YES.

2. A. Average Plant flow for the last five days: 2.835 mgd
   B. Expected Plant flow for the next 24 hours: 2.835 mgd

3. List the last three days of Final Effluent TSS with the most recent last: 1.0 mg/L, 1.0 mg/L, 2.1 mg/L

4. Contact Closure: (Expected Flow / 10,000 / 20) 14.175 → 14 Pulses per sample.

5. Samplers for Final Effluent & FB calibrated at 600 ml per sample. (Desired volume/20) 12L
   Final Effluent Start Time / Date: 1202 / 070813 Calibrated to: 600 mL
   FB Start Time / Date: 1202/070813 Calibrated to: 600 mL

The above information has been completed prior to the beginning of the sampling event. Int. MB

Sampling personnel: M. Bertsch, _____, _____

Information Check At The End Of The Sampling Event

1. Are all lids, compression assemblies and caps secure?(Y)/ N
2. Final Effluent TSS for the sampling period: 2.0 mg/L
3. Plant flow for the sampling period 2.886 mgd
4. Number of samples collected in each Final Effluent & FB composite container:
   Final Effluent: 21
   FB: 21
5. Final Effluent & FB composite end time and date:
   Final Effluent End Time / Date: 1202 / 070913
   FB End Time / Date: 1202 / 070913
6. Is Temperature in collection container at the end of sampling <6° C? (Y) / N
7. Are sample volumes equal in all composite containers? (Y) / N
8. Grab times and dates:
   FB VOA: N/A FNE VOA: N/A
   Oil & Grease: N/A Free Cyanide: N/A
   Total Phenol: N/A

Sampling personnel: M. Bertsch, _____, _____

Please contact project lead with any problems incurred during the sampling event.

Record any other information that could affect sample results:
*mercury only

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07/31/14 - Stafford County - Little Falls - Permit Application 2A

This analytical report contains 19 pages

Hugh Jones hjones@co.stafford.va.us
Laboratory Supervisor
County of Stafford
950 Kings Highway
Fredericksburg, VA 22405

Danny Barker, TSD Environmental Scientist dbarker@hrsd.com

Date Sent: 08/26/14

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL/MAP Coordinator at (757) 460-4205.
creno@hrsd.com

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282757
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Mercury, Dissolved	EPA 245.7	ng/l	<10.0		10.0	KWILLIAMS	08/15/14	10:46
Antimony, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<20		20	KWILLIAMS	08/14/14	12:38
Arsenic, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<20		20	KWILLIAMS	08/14/14	12:38
Beryllium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:38
Cadmium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.1		0.1	KWILLIAMS	08/14/14	12:38
Chromium, Total	EPA 200.8, Rev. 5.4	ug/l	<5.0		5.0	KWILLIAMS	08/14/14	12:44
Copper, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:38
Lead, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:38
Nickel, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<2.0		2.0	KWILLIAMS	08/14/14	12:38
Selenium, Total	EPA 200.8, Rev. 5.4	ug/l	<2.0		2.0	KWILLIAMS	08/14/14	12:44
Silver, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.20		0.20	KWILLIAMS	08/14/14	12:38
Thallium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.50		0.50	KWILLIAMS	08/14/14	12:38
Zinc, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<10		10	KWILLIAMS	08/14/14	12:38
1,2,4-Trichlorobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
1,2-Diphenylhydrazine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
1,2-Diphenylhydrazine is converted to Azobenzene in the extraction process.								
2,4,6-Trichlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2,4-Dichlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
*Analyte is not included in the HRSD CEL VELAP scope of accreditation

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282757
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
2,4-Dimethylphenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2,4-Dinitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2,4-DNT	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2,6-DNT	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2-Chloronaphthalene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2-Nitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
3,3-Dichlorobenzidine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4,6-Dinitro-o-Cresol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4-Bromophenyl phenyl ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4-Chloro-m-cresol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4-Chlorophenyl phenyl ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4-Nitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Acenaphthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Acenaphthylene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzidine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzo(a) anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzo(a) pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56

Notes

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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282757
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Benzo(b) fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzo(ghi) perylene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzo(k) fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Bis(2-chloroethoxy) methane	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Bis(2-chloroethyl) ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Bis(2-chloroisopropyl) ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Butylbenzylphthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Chrysene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Di(2-ethylhexyl)phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Dibenzo (ah) anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Diethyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Dimethyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Di-n-butyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Di-n-octyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Fluorene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Hexachlorobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Hexachlorobutadiene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282757
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Hexachlorocyclopentadiene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Hexachloroethane	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Indeno (1,2,3-cd) pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Isophorone	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Naphthalene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Nitrobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
n-Nitrosodimethylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
n-Nitrosodi-n-Propylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
n-Nitrosodiphenylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
n-Nitrosodiphenylamine is converted to Diphenylamine in the injection port.								
o-Chlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Pentachlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Phenanthrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Phenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56

Notes

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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-G-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282756
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
1,1,1-Trichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,1,2,2-Tetrachloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,1,2-Trichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,1-Dichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,1-Dichloroethylene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,2-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,2-Dichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,2-Dichloropropane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,3-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,3-Dichloropropene (cis+trans)	EPA 624	ug/l	<20.0		20.0	SLOPEZ	08/01/14	13:20
1,4-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
2-Chloroethyl Vinyl Ether	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Acrolein	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Acrylonitrile	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Benzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Bromodichloromethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Bromoform	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Bromomethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20

Notes

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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-G-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282756
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Carbon Tetrachloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chlorodibromomethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chloroform	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chloromethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Ethylbenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Methylene Chloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Tetrachloroethene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Toluene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
trans-1,2-Dichloroethene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Trichloroethylene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Vinyl Chloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Hardness, Total	SM 2340B 20th Ed.	mg eq CaCO3/l	135		1.16	SLABOCKI	08/08/14	08:44
Mercury, Dissolved	EPA 245.7	ng/l	<10.1		10.1	KWILLIAMS	08/15/14	10:46
Calcium, Total	EPA 200.7, Rev. 4.4	mg/l	29.7		0.300	SLABOCKI	08/08/14	08:44
Magnesium, Total	EPA 200.7, Rev. 4.4	mg/l	14.7		0.100	SLABOCKI	08/08/14	08:44
Antimony, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<20		20	KWILLIAMS	08/14/14	12:20
Arsenic, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<20		20	KWILLIAMS	08/14/14	12:20
Beryllium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:20
Cadmium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.1		0.1	KWILLIAMS	08/14/14	12:20
Chromium, Total	EPA 200.8, Rev. 5.4	ug/l	<5.0		5.0	KWILLIAMS	08/14/14	12:49
Copper, Dissolved	EPA 200.8, Rev. 5.4	ug/l	1.2		1.0	KWILLIAMS	08/14/14	12:20
Lead, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:20
Nickel, Dissolved	EPA 200.8, Rev. 5.4	ug/l	7.1		2.0	KWILLIAMS	08/14/14	12:20
Selenium, Total	EPA 200.8, Rev. 5.4	ug/l	<2.0		2.0	KWILLIAMS	08/14/14	12:49
Silver, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.20		0.20	KWILLIAMS	08/14/14	12:20
Thallium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.50		0.50	KWILLIAMS	08/14/14	12:20
Zinc, Dissolved	EPA 200.8, Rev. 5.4	ug/l	41		10	KWILLIAMS	08/14/14	12:20
1,2,4-Trichlorobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27

Notes

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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
1,2-Diphenylhydrazine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
1,2-Diphenylhydrazine is converted to Azobenzene in the extraction process.								
2,4,6-Trichlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,4-Dichlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,4-Dimethylphenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,4-Dinitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,4-DNT	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,6-DNT	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2-Chloronaphthalene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2-Nitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
3,3-Dichlorobenzidine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4,6-Dinitro-o-Cresol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4-Bromophenyl phenyl ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4-Chloro-m-cresol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4-Chlorophenyl phenyl ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4-Nitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Acenaphthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Acenaphthylene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27

Notes

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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzidine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(a) anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(a) pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(b) fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(ghi) perylene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(k) fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Bis(2-chloroethoxy) methane	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Bis(2-chloroethyl) ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Bis(2-chloroisopropyl) ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Butylbenzylphthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Chrysene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Di(2-ethylhexyl)phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Dibenzo (ah) anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Diethyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Dimethyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Di-n-butyl phthalate	EPA 625	ug/l	<10.0	IA1	10.0	IGERASIMOV	08/07/14	00:27
Di-n-octyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27

Notes

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IA1 - The precision of the matrix spike and matrix spike duplicate was outside of acceptable limits.

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Fluorene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Hexachlorobenzene	EPA 625	ug/l	<10.0	IA1	10.0	IGERASIMOV	08/07/14	00:27
Hexachlorobutadiene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Hexachlorocyclopentadiene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Hexachloroethane	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Indeno (1,2,3-cd) pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Isophorone	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Naphthalene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Nitrobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
n-Nitrosodimethylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
n-Nitrosodi-n-Propylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
n-Nitrosodiphenylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
n-Nitrosodiphenylamine is converted to Diphenylamine in the injection port.								
o-Chlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Pentachlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Phenanthrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Phenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27

Notes

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IA1 - The precision of the matrix spike and matrix spike duplicate was outside of acceptable limits.

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Total Dissolved Solids	SM 2540C, 2011	mg/l	360		1.0	TGAY	08/01/14	15:07

Notes

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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-G-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282758
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Total Cyanide	Lachat 10-204-00-1X	ug/l	<10		10	AMOORE	08/03/14	12:22
HEM	EPA 1664B	mg/l	<5.0		5.0	JRICKS	08/03/14	08:40
Phenol, Total	Lachat 10-210-00-1-B	mg/l	<0.05		0.05	AMOORE	08/14/14	11:15
SGT-HEM	EPA 1664B	mg/l	<5.0		5.0	JRICKS	08/03/14	15:53
1,1,1-Trichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,1,2,2-Tetrachloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,1,2-Trichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,1-Dichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,1-Dichloroethylene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,2-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,2-Dichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,2-Dichloropropane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,3-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,3-Dichloropropene (cis+trans)	EPA 624	ug/l	<20.0		20.0	SLOPEZ	08/01/14	15:15
1,4-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
2-Chloroethyl Vinyl Ether	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Acrolein	EPA 624	ug/l	<50.0		50.0	SLOPEZ	08/01/14	12:51
Acrylonitrile	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15

Notes

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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-G-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282758
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Benzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Bromodichloromethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Bromoform	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Bromomethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Carbon Tetrachloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chlorodibromomethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chloroform	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chloromethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Ethylbenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Methylene Chloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Tetrachloroethene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Toluene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
trans-1,2-Dichloroethene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Trichloroethylene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Vinyl Chloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15

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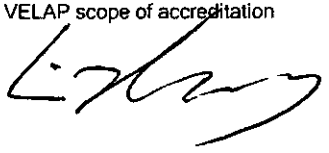
Authorized By: Li Zhang - Lab Manager



Date Authorized: 8/21/2014

HRSD
Cleaning wastewater every day for a better Bay.

CENTRAL ENVIRONMENT LABORATORY
1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455
TEL: 757-460-4214
FAX: 757-460-6586

CHAIN OF CUSTODY

COC ID: 13036 COC NAME: ST_08/01/14 06:47

Sample ID	Container No	Job Name	Date	Time	Sampler Id	Matrix	Type	Samp Temp oC	Preservation	Status	CN_FIA	IARDNES	HEM	CVAF_24	CP_200_7	PMS_200
LF_FB-C-073114-1	C177452	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.4	.	R						
	C177451	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.6	.	R						
	C177439	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.5	.	R						
	C177438	ST_LF-31-JUL-14-164	07/31/2014			L	C	.	.	R				X		
	C177437	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R						X
	C177436	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R						X
LF_FB-G-073114-1	C177449	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.5	.	R						
	C177448	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.8	.	R						
	C177435	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.8	.	R						
LF_FNE-C-073114-1	C177463	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.7	.	R						
	C177462	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	1.0	.	R						
	C177461	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.6	.	R						
	C177460	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.7	.	R						
	C177459	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.6	.	R						
	C177458	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	2.0	.	R						
	C177457	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.9	.	R						
	C177456	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.4	.	R						
	C177446	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	1.2	.	R						
	C177445	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R				X		
	C177444	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R						X
	C177443	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R		X			X	X
LF_FNE-G-073114-1	C177482	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.8	.	R						
	C177481	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.6	.	R						
	C177480	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	1.4	.	R						
	C177479	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.9	.	R						

PHNL_FIA	EMIVOL62	SGT	VOC624
	X		
	X		
	X		
			X
			X
			X
	X		
	X		
	X		
	X		
	X		
	X		
	X		
	X		
	X		
			X
			X
			X
			X

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CHAIN OF CUSTODY

COC ID: 13036 COC NAME: ST_08/01/14 06:47

Sample ID	Container No	Job Name	Date	Time	Sampler Id	Matrix	Type	Samp Temp oC	Preservation	Status	CN_FIA	IARDNES	HEM	_CVAF_24	CP_200_7	PMS_200
	C177478	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	1.1	.	R						
	C177477	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.5	.	R						
	C177476	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	1.1	.	R						
	C177475	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	1.0	.	R						
	C177474	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.8	.	R						
	C177473	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.9	.	R						
	C177455	ST_LF-31-JUL-14-164	07/31/2014	1100	MWIGGI	L	G	1.1	.	R			X			
	C177454	ST_LF-31-JUL-14-164	07/31/2014	1100	MWIGGI	L	G	0.8	.	R			X			
	C177453	ST_LF-31-JUL-14-164	07/31/2014	1100	MWIGGI	L	G	1.0	.	R			X			
	C177442	ST_LF-31-JUL-14-164	07/31/2014	1100	MWIGGI	L	G	0.7	.	R			X			
	C177441	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	G	0.8	pH > 10	R	X					
	C177440	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	G	0.9	pH < 2	R						

Comments:

Sample ID	Container No	Comment
LF_FB-C-073114-1	C177438	sample time 1058 by MW

ACTION	BY	DATE/TIME
INITIATED:	Jennifer Reitz - Water Quality Specialist	8/1/2014 6:32:27 AM
CUSTODY:		
RECEIVED:	Greg Hill - Chemist	8/1/2014 7:33:28 AM

PHNL_FIA	EMIVOL62	SGT	VOC624
			X
			X
			X
			X
			X
			X
		X	
		X	
		X	
		X	
X			

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FAX: 757-460-6586

CHAIN OF CUSTODY

COC ID: 13039 COC NAME: ST_08/01/14 09:33

Sample ID	Container No	Job Name	Date	Time	Sampler Id	Matrix	Type	Samp Temp oC	Preservation	Status	TDS
LF_FNE-C-073114-1	C177447	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.9		R	x

Comments:

Sample ID Container No Comment

ACTION	BY	DATE/TIME
INITIATED:	Jennifer Reitz - Water Quality Specialist	8/1/2014 9:33:03 AM
CUSTODY:		
RECEIVED:	Greg Hill - Chemist	8/1/2014 9:37:44 AM

FIELD RECORD (S)

Little Falls VPDES Field Sheet

Information To Be Checked Before The Start of Each Sampling Event

1. Does the Final Effluent have any abnormal characteristics (odor, color)? Y / (N)

If the answer to the above questions is NO proceed to the next section. Please contact a supervisor if the answer is YES.

2. A. Average Plant flow for the last ~~five~~ 4 days: ~2.6 MGD
   B. Expected Plant flow for the next 24 hours: 2.8 MGD
3. List the last three days of Final Effluent TSS with the most recent last: 0.7 mg/L, 2.0 mg/L, 0.4 mg/L
4. Contact Closure: (Expected Flow 2.8MGD / 10000 / 30) 9 Pulses per sample.
5. Samplers for Final Effluent & FB calibrated at 550 ml per sample. (Desired volume 16.5L / 30)
   Final Effluent Start Time / Date: 1050 / 073014 Calibrated to: 550 mL
   FB Start Time / Date: 1050 / 073014 Calibrated to: 550 mL

The above information has been completed prior to the beginning of the sampling event. Int. MW

Sampling personnel: M. Wiggins, J. Reitz, _____

Information Check At The End Of The Sampling Event

1. Are all lids, compression assemblies and caps secure? (Y) / N
2. Final Effluent TSS for the sampling period: 0.1 mg/L (07/30), 0.6 mg/L (07/31)
3. Plant flow for the sampling period 2.561 MGD (07/30), 3.279 MGD (07/31)
4. Number of samples collected in each Final Effluent & FB composite container:
   Final Effluent: 29
   FB: 29
5. Final Effluent & FB composite end time and date:
   Final Effluent End Time / Date: 1050 / 073114
   FB End Time / Date: 1050 / 073114
6. Is Temperature in collection container at the end of sampling <6° C? (Y) / N
7. Are sample volumes equal in all composite containers? (Y) / N
8. Grab times and dates:
   FB VOA: 1030 / 073114 FNE VOA: 1030 / 073114
   Oil & Grease: 1100 / 073114 Total ~~Free~~ Cyanide: 1050 / 073114 (MW 073114)
   Total Phenol: 1050 / 073114

Sampling personnel: M. Wiggins, J. Reitz, _____

Please contact project lead with any problems incurred during the sampling event.

Record any other information that could affect sample results:

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04/25/12 - Stafford County - Little Falls - Permit Application

This analytical report contains 11 pages

Hugh Jones
Laboratory Supervisor
County of Stafford
950 Kings Highway
Fredericksburg, VA 22405

hjones@co.stafford.va.us

Date Sent: 05/14/12

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: March 23, 2012
Expiration Date: June 14, 2012
Certificate # 1465

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Total Metals							
Chromium	EPA 200.8	ug/L	<5.0	5.0	KWILLI	05/03/12	11:03
Selenium	EPA 200.8	ug/L	<2.0	2.0	KWILLI	05/03/12	11:03
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	KWILLI	05/03/12	10:57
Arsenic	EPA 200.8	ug/L	<20	20	KWILLI	05/03/12	10:57
Beryllium	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	10:57
Cadmium	EPA 200.8	ug/L	<0.1	0.1	KWILLI	05/03/12	10:57
Chromium III (measured as Total Chromium)		ug/L	<5.0	5.0	KWILLI	05/03/12	11:03
Chromium VI (measured as Total Chromium)		ug/L	<5.0	5.0	KWILLI	05/03/12	11:03
Copper	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	10:57
Lead	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	10:57
Mercury	EPA 245.7	ng/L	<10.0	10.0	SLABOC	05/01/12	10:51
Nickel	EPA 200.8	ug/L	<2.0	2.00	KWILLI	05/03/12	10:57
Silver	EPA 200.8	ug/L	<0.1	0.10	KWILLI	05/03/12	10:57
Thallium	EPA 200.8	ug/L	<0.1	0.10	KWILLI	05/03/12	10:57
Zinc	EPA 200.8	ug/L	<10.0	10.0	KWILLI	05/03/12	10:57
Volatile Organics							
Acrolein	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Benzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Bromoform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Carbon Tetrachloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Chlorodibromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Chloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
2-Chloro-ethylvinyl Ether	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Chloroform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Dichlorobromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics cont.							
1,2 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,3 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,4 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,2-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,2-trans-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,2-Dichloropropane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<20.0	20.0	SLOPEZ	04/26/12	16:24
Ethylbenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Methyl Bromide	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Methyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Tetrachloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Toluene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1,1-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
1,1,2-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24
Vinyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	16:24

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables							
p-Chloro-m-cresol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2-Nitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
4-Nitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Phenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Acenapthylene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/08/12	17:42
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Benzo(GHI)Perylene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
4-Bromophenyl Phenyl Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
4-Chlorophenyl phenyl ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Chrysene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Di-n-octyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Dimethyl Phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
2,6-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
1,2-Diphenylhydrazine[2]	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Fluorene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Isophorone	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Naphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Phenanthrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
Pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	16:54

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 5/14/12

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Miscellaneous Parameters							
Free Cyanide	ASTM D 4282	ug/L	<10	10	AMOORE	04/26/12	08:05
Oil and Grease HEM	EPA 1664A	mg/L	<5.0	5.0	JRICKS	05/01/12	7:30
Total Dissolved Solids	SM 2540C	mg/L	347	1.0	MGRIBB	04/26/12	14:09
Total Phenol	LACH 10-210-00-1-B	mg/L	<0.05	0.05	AMOORE	05/04/12	11:06
Hardness (as $CaCO_3$)	SM2340B	mg eq $CaCO_3$/L	132	0.20	SWILLI	05/03/12	12:18
Total Metals							
Chromium	EPA 200.8	ug/L	<5.0	5.0	KWILLI	05/03/12	11:42
Selenium	EPA 200.8	ug/L	<2.0	2.0	KWILLI	05/03/12	11:42
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	KWILLI	05/03/12	11:08
Arsenic	EPA 200.8	ug/L	<20	20	KWILLI	05/03/12	11:08
Beryllium	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	11:08
Cadmium	EPA 200.8	ug/L	<0.1	0.1	KWILLI	05/03/12	11:08
Chromium III (measured as Total Chromium)		ug/L	<5.0	5.0	KWILLI	05/03/12	11:42
Chromium VI (measured as Total Chromium)		ug/L	<5.0	5.0	KWILLI	05/03/12	11:42
Copper	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	11:08
Lead	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/03/12	11:08
Mercury	EPA 245.7	ng/L	<10.0	10.0	SLABOC	05/01/12	10:58
Nickel	EPA 200.8	ug/L	5.6	2.0	KWILLI	05/03/12	11:08
Silver	EPA 200.8	ug/L	<0.1	0.10	KWILLI	05/03/12	11:08
Thallium	EPA 200.8	ug/L	<0.1	0.10	KWILLI	05/03/12	11:08
Zinc	EPA 200.8	ug/L	38.4	10.0	KWILLI	05/03/12	11:08

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics							
Acrolein	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Benzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Bromoform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Carbon Tetrachloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Chlorodibromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Chloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
2-Chloro-ethylvinyl Ether	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Chloroform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Dichlorobromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,2 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,3 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,4 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,2-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,2-trans-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,2-Dichloropropane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<20.0	20.0	SLOPEZ	04/26/12	19:22
Ethylbenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Methyl Bromide	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Methyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Tetrachloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Toluene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1,1-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
1,1,2-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22
Vinyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/26/12	19:22

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables							
p-Chloro-m-cresol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2-Nitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
4-Nitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Phenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Acenapthylene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/08/12	19:58
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Benzo(GHI)Perylene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
4-Bromophenyl Phenyl Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
4-Chlorophenyl phenyl ether	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Chrysene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Di-n-octyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/25/12

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Dimethyl Phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
2,6-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
1,2-Diphenylhydrazine[2]	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Fluorene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Isophorone	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Naphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Phenanthrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
Pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	05/03/12	18:56

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

Authorization: Robin Parnell **Date:** 5/14/12

Lab Manager / **QA Manager**

CENTRAL ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REPORT
Level 1

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Project: Stafford County - Little Falls WWTF - Permit Application
Project Code: Final Effluent
Sample Point: FB; FNE
Sample Date: 04/25/12

Analytical Run Information	Sb	As	Be	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Tl	Zn
Method	200.8	200.8	200.8	200.8	200.8	200.8	200.8	245.7	200.8	200.8	200.8	200.8	200.8
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L
Limit of Detection (LOD)	0.22	0.06	0.01	0.006	0.04	0.09	0.01	1.1	0.08	0.12	0.05	0.03	0.24
Limit of Quantitation (LOQ)	20.0	20.0	1.0	0.1	5.0	1.0	1.0	10.0	2.0	2.0	0.10	0.10	10.0
Method Blank (MB)	<0.22	<0.06	<0.01	<0.006	<0.04	<0.09	*0.02	<1.1	<0.08	<0.12	<0.05	<0.03	<0.24

Total Metals	Cr	Se
Sample ID: ST_LF FNE TOTAL		
Matrix Spike Conc.	10.0	10.0
MS Percent Recovery	95%	97%
MSD Percent Recovery	91%	91%
MS/MSD RPD	4	7

Dissolved Metals	Sb	As	Be	Cd	Cu	Pb	Hg	Ni	Ag	Tl	Zn
Sample ID: ST_LF FNE DS											
Matrix Spike Conc.	50.0	50.0	5.0	1.0	10.0	5.0	20.0	10.0	5.0	1.0	50.0
MS Percent Recovery	97%	98%	91%	94%	86%	97%	99%	84%	88%	97%	82%
MSD Percent Recovery	96%	96%	91%	90%	88%	96%	102%	88%	87%	100%	86%
MS/MSD RPD	1	2	1	4	2	1	3	3	2	3	2

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
*Report Limit is lowest concentration at which quantitation is demonstrated. Values below Report Limit should not be used for compliance determinations due to a high degree of uncertainty.

Validated By: _____ Date: 05/01/12

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1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455
TEL: 757-460-4214
FAX: 757-460-6586

CHAIN OF CUSTODY

PROJECT NAME/CODE: Little Falls VPDES 2A

ANALYSES REQUESTED, CON & NUMBER OF CONTAINERS

Project in Lims? Yes ____ No ✓

HRSD Use Only

CUSTOMER SAMPLE ID	HRSD Use Only: PROJECT CODE	HRSD Use Only: SAMPLE POINT	DATE	TIME	SAMPLED BY	Circle One: MATRIX	Circle One: SAMPLE TYPE	TOTAL METALS (5)	DISSOLVED METALS (5S)	Hg Diss 245.7 (5G)	Semi Vol (9-9b)	Semi Vol (9-9h)	TDS (1)	VOA (10-10b)	VOA (10-10o)	Total Phenol (3)	Oil & Grease (8-8c)	Free Cyanide (6A)					HRSD Use Only: Presv'd Checked	HRSD Use Only: CONT. COUNT
Field Blank	ST_LF	FB	4/25/2012	1058	MW	L	C	1	1	1	3												✓	6
Field Blank	ST_LF	FB	4/25/2012	1025	MW	L	G							3									✓	3
Final Effluent	ST_LF	FNE	4/25/2012	1058	MW	L	C	1	1	1		9	1										✓	13
Final Effluent	ST_LF	FNE	4/25/2012	1025	MW	L	G								6								✓	6
Final Effluent	ST_LF	FNE	4/25/2012	1030	MW	L	G									1							✓	1
Final Effluent	ST_LF	FNE	4/25/2012	1040	MW	L	G										4						✓	4
Final Effluent	ST_LF	FNE	4/25/2012	1030	MW	L	G											1					✓	1

COMMENTS:

For Ground Water Use Only
Temp. Blank 1 ____ °C
Temp. Blank 2 ____ °C

Relinquished by / Signature	Date/Time 04/26/12 0824
Received by / Signature	Date/Time 4/26/12 0824
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time

Temp. Requirement

Where required, submitted samples were transported in coolers maintained at ≤ 6 °C.

Yes ✓ No ____

Int MW

***Preservatives**

- *Hg, Metals (pH<2 - HNO3) (Clean metals check in section)
- *O&G (pH<2 - HCl, check in section) & store ≤ 6 °C
- CN (pH>12 - NaOH) & store ≤ 6 °C
- *Sulfide (pH>9 - NaOH+ZnAc) & store ≤ 6 °C
- *Micro ($Na_2S_2O_3$ + EDTA) & store < 10 °C
- *COD, NUT, Phenols (pH<2 - H_2SO_4) & store ≤ 6 °C
- *TOC (pH<2 - H_3PO_4) & store ≤ 6 °C
- *BOD, TSS, TVSS, Turbidity, Surfactant, Sulfate store ≤ 6 °C
- *NUT Non Acidified, Conductivity, Organics store ≤ 6 °C
- *Cr (VI) (pH 9.3 - 9.7 - $(NH_4)_2SO_4$) & store ≤ 6 °C

All sample(s) met proper *preservation requirements. Yes ✓ No ____ Int 6/4/1

Sample Type: C=Composite, G=Grab Matrix: L= Liquid , S = Solid CGN: Container Group Number

NOTE: ALL APPLICABLE INFORMATION MUST BE COMPLETED PRIOR TO ACCEPTANCE.

FIELD RECORD (S)

Little Falls VPDES Field Sheet

Information To Be Checked Before The Start of Each Sampling Event

1. Does the Final Effluent have any abnormal characteristics (odor, color)? Y / (N)

If the answer to the above questions is NO proceed to the next section. Please contact a supervisor if the answer is YES.

2. A. Average Plant flow for the last five days: 3.28 MGD
   B. Expected Plant flow for the next 24 hours: ~4 MGD

3. List the last three days of Final Effluent TSS with the most recent last: 1.5 mg/L, 1.8 mg/L, 0.5 mg/L

4. Contact Closure: (Expected Flow 4 MGD / 10000 / 30) 13 Pulses per sample. 16.52

5. Samplers for Final Effluent & FB calibrated at 550 ml per sample. (Desired volume/30)
   Final Effluent Start Time / Date: 1058 042412 Calibrated to: 550 mL
   FB Start Time / Date: 1058 042412 Calibrated to: 550 mL

The above information has been completed prior to the beginning of the sampling event. Int. MW

Sampling personnel: M. Wiggins, R. Hunt, _____

Information Check At The End Of The Sampling Event

1. Are all lids, compression assemblies and caps secure? (Y) / N

2. Final Effluent TSS for the sampling period: 1.1 mg/L (4/24), 1.1 mg/L (4/25)

3. Plant flow for the sampling period 3.107 MGD (4/24), 2.871 MGD (4/25)

4. Number of samples collected in each Final Effluent & FB composite container:
   Final Effluent: 23
   FB: 23

5. Final Effluent & FB composite end time and date:
   Final Effluent End Time / Date: 1058 / 042512
   FB End Time / Date: 1058 / 042512

6. Is Temperature in collection container at the end of sampling <6° C? (Y) / N

7. Are sample volumes equal in all composite containers? (Y) / N

8. Grab times and dates:
   FB VOA: 1025 / 042512
   Oil & Grease: 1040 / 042512
   Total Phenol: 1030 / 042512
   FNE VOA: 1025 / 042512
   Free Cyanide: 1030 / 042512

Sampling personnel: M. Wiggins, R. Hunt, _____

Please contact project lead with any problems incurred during the sampling event.

Record any other information that could affect sample results:

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04/24/13 - Stafford County - Little Falls - Permit Application

This analytical report contains 11 pages

Hugh Jones
Laboratory Supervisor
County of Stafford
950 Kings Highway
Fredericksburg, VA 22405

hjones@co.stafford.va.us

Date Sent: 05/22/13

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: June 15, 2012
Expiration Date: June 14, 2013
Certificate # 1612

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Total Metals							
Chromium	EPA 200.8	ug/L	<5.0	5.0	KWILLI	05/02/13	13:39
Selenium	EPA 200.8	ug/L	<2.0	2.0	KWILLI	05/02/13	13:39
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	KWILLI	05/02/13	13:32
Arsenic	EPA 200.8	ug/L	<20	20	KWILLI	05/02/13	13:32
Beryllium	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	13:32
Cadmium	EPA 200.8	ug/L	<0.1	0.1	KWILLI	05/02/13	13:32
Chromium III (measured as Total Chromium)		ug/L		5.0			
Chromium VI (measured as Total Chromium)		ug/L		5.0			
Copper	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	13:32
Lead	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	13:32
Nickel	EPA 200.8	ug/L	<2.00	2.00	KWILLI	05/02/13	13:32
Silver	EPA 200.8	ug/L	<0.10	0.10	KWILLI	05/02/13	13:32
Thallium	EPA 200.8	ug/L	<0.10	0.10	KWILLI	05/02/13	13:32
Zinc	EPA 200.8	ug/L	<10.0	10.0	KWILLI	05/02/13	13:32
Volatile Organics							
Acrolein	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/27/13	04:01
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/27/13	04:01
Benzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Bromoform	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Carbon Tetrachloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Chlorodibromomethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Chloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
2-Chloro-ethylvinyl Ether	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Chloroform	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Dichlorobromomethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics cont.							
1,2 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,3 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,4 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1-Dichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,2-Dichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1-Dichloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,2-trans-Dichloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,2-Dichloropropane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<10.0	10.00	SLOPEZ	04/27/13	04:01
Ethylbenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Methyl Bromide	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Methyl Chloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Tetrachloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Toluene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1,1-Trichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
1,1,2-Trichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01
Vinyl Chloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	04:01

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables •							
p-Chloro-m-cresol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2-Nitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
4-Nitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Phenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Acenapthylene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Benzo(GHI)Perylene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
4-Bromophenyl Phenyl Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
4-Chlorophenyl phenyl ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Chrysene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Di-n-octyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

•*-Acid surrogate recoveries were below the acceptable limits due to possible analytical procedural error. However, the recoveries of these surrogates were within acceptable limits in Method Blank, Laboratory Control Sample and FNE sample. The percent recovery of the sample matrix spike and matrix duplicate were also within acceptable limits.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Dimethyl Phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
2,6-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
1,2-Diphenylhydrazine[2]	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Fluorene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Isophorone	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Naphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Phenanthrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
Pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	11:22

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 5/22/13

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Miscellaneous Parameters							
Free Cyanide	ASTM D 4282	ug/L	<10	10	AMOORE	05/02/13	07:05
Oil and Grease HEM	EPA 1664A	mg/L	<5.0	5.0	RMORGA	05/01/13	08:00
Total Dissolved Solids	SM 2540C	mg/L	345	1.0	RCASTR	04/25/13	17:38
Total Phenol	LACH 10-210-00-1-B	mg/L	<0.05	0.05	AMOORE	05/16/13	10:16
Hardness (as $CaCO_3$)	SM2340B	mg eq $CaCO_3$/L	117	1.16	SLABOC	05/08/13	09:18
Total Metals							
Chromium	EPA 200.8	ug/L	<5.0	5.0	KWILLI	05/02/13	14:34
Selenium	EPA 200.8	ug/L	<2.0	2.0	KWILLI	05/02/13	14:34
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	KWILLI	05/02/13	14:03
Arsenic	EPA 200.8	ug/L	<20	20	KWILLI	05/02/13	14:03
Beryllium	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	14:03
Cadmium	EPA 200.8	ug/L	<0.1	0.1	KWILLI	05/02/13	14:03
Chromium III (measured as Total Chromium)		ug/L		5.0			
Chromium VI (measured as Total Chromium)		ug/L		5.0			
Copper	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	14:03
Lead	EPA 200.8	ug/L	<1.0	1.0	KWILLI	05/02/13	14:03
Nickel	EPA 200.8	ug/L	5.9	2.0	KWILLI	05/02/13	14:03
Silver	EPA 200.8	ug/L	<0.10	0.10	KWILLI	05/02/13	14:03
Thallium	EPA 200.8	ug/L	<0.10	0.10	KWILLI	05/02/13	14:15
Zinc	EPA 200.8	ug/L	39.0	10.0	KWILLI	05/02/13	14:03

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics							
Acrolein	EPA 624	ug/L	<50.0	50.0	SLOPEZ	04/27/13	03:31
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/27/13	05:59
Benzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Bromoform	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Carbon Tetrachloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Chlorodibromomethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Chloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
2-Chloro-ethylvinyl Ether	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Chloroform	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Dichlorobromomethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,2 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,3 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,4 Dichlorobenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1-Dichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,2-Dichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1-Dichloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,2-trans-Dichloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,2-Dichloropropane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<10.0	10.0	SLOPEZ	04/27/13	05:59
Ethylbenzene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Methyl Bromide	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Methyl Chloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Tetrachloroethylene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Toluene	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1,1-Trichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
1,1,2-Trichloroethane	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59
Vinyl Chloride	EPA 624	ug/L	<5.00	5.00	SLOPEZ	04/27/13	05:59

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables							
p-Chloro-m-cresol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2-Nitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
4-Nitrophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Phenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Acenapthylene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Benzo(GHI)Perylene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
4-Bromophenyl Phenyl Ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
4-Chlorophenyl phenyl ether	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Chrysene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Di-n-octyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 04/24/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Dimethyl Phthalate	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
2,6-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
1,2-Diphenylhydrazine[2]	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Fluoranthene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Fluorene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Isophorone	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Naphthalene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Phenanthrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
Pyrene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	SLOPEZ	05/07/13	14:33

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 5/22/13

CENTRAL ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REPORT
Level 1

Project: Stafford County - Little Falls WWTF - Permit Application
Project Code: Final Effluent
Sample Point: FB; FNE
Sample Date: 04/24/13

Analytical Run Information	Sb	As	Be	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Tl	Zn
Method	200.8	200.8	200.8	200.8	200.8	200.8	200.8	245.7	200.8	200.8	200.8	200.8	200.8
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ng/L	ug/L	ug/L	ug/L	ug/L	ug/L
Limit of Detection (LOD)	0.22	0.06	0.01	0.006	0.04	0.09	0.01	1.1	0.08	0.12	0.05	0.03	0.24
Limit of Quantitation (LOQ)	20.0	20.0	1.0	0.1	5.0	1.0	1.0	10.0	2.0	2.0	0.10	0.10	10.0
Method Blank (MB)	<0.22	<0.06	<0.01	<0.006	<0.04	<0.09	<0.01		<0.08	<0.12	<0.05	<0.03	<0.24
Total Metals					Cr					Se			
Sample ID: ST_LF FNE TOTAL													
Matrix Spike Conc.					10.0					10.0			
MS Percent Recovery					91%					91%			
MSD Percent Recovery					94%					93%			
MS/MSD RPD					3					3			
Dissolved Metals	**Sb**	**As**	**Be**	**Cd**		**Cu**	**Pb**	**Hg**	**Ni**		**Ag**	**Tl**	**Zn**
Sample ID: ST_LF FNE DS													
Matrix Spike Conc.	50.0	50.0	5.0	1.0		10.0	5.0	20.0	10.0		5.0	1.0	50.0
MS Percent Recovery	98%	101%	92%	97%		88%	100%		88%		94%	96%	83%
MSD Percent Recovery	98%	100%	92%	98%		87%	100%		85%		97%	98%	83%
MS/MSD RPD	<1	<1	<1	2		1	<1		2		3	1	<1

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
*Report Limit is lowest concentration at which quantitation is demonstrated. Values below Report Limit should not be used for compliance determinations due to a high degree of uncertainty.

Validated By: _____ Date: 5/17/13

CHAIN OF CUSTODY

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1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455
TEL: 757-460-4214
FAX: 757-460-6586

PROJECT NAME/CODE: Little Falls VPDES 2A

ANALYSES REQUESTED, CGN & NUMBER OF CONTAINERS

Project in Lims? Yes ___ No ✓

CUSTOMER SAMPLE ID	HRSD Use Only: PROJECT CODE	HRSD Use Only: SAMPLE POINT	DATE	TIME	SAMPLED BY	Circle One: MATRIX	Circle One: SAMPLE TYPE	TOTAL METALS (5)	DISSOLVED METALS (5S)	Semi Vol (9-9b)	Semi Vol (9-9h)	TDS (1)	VOA (10-10b)	VOA (10-10e)	Total Phenol (3)	Oil & Grease (8-9c)	Free Cyanide (64)						HRSD Use Only: Pres'd Checked	HRSD Use Only: CONT. COUNT
Field Blank	ST_LF	FB	4/24/2013	1144	MW	L	C	1	1	3													✓	5
Field Blank	ST_LF	FB	4/24/2013	1030	MW	L	G						3										✓	3
Final Effluent	ST_LF	FNE	4/24/2013	1144	MW	L	C	1	1		9	1											✓	12
Final Effluent	ST_LF	FNE	4/24/2013	1030	MW	L	G							6									✓	6
Final Effluent	ST_LF	FNE	4/24/2013	1035	MW	L	G								1								✓	1
Final Effluent	ST_LF	FNE	4/24/2013	1045	MW	L	G									4							✓	4
Final Effluent	ST_LF	FNE	4/24/2013	1035	MW	L	G										1						✓	1

For Ground Water Use Only
Temp. Blank 1: ___ °C
Temp. Blank 2: ___ °C

COMMENTS:

Relinquished by / Signature	Date/Time 04/25/13 0946	Temp. Requirement: Where required, submitted samples were transported in coolers maintained at ≤ 6 °C. Yes ✓ No ___ Int MW
Received by / Signature	Date/Time 4/25/13 0946	
Relinquished by / Signature	Date/Time	
Received by / Signature	Date/Time	
Relinquished by / Signature	Date/Time	
Received by / Signature	Date/Time	
Relinquished by / Signature	Date/Time	
Received by / Signature	Date/Time	

All sample(s) met proper *preservation requirements. Yes ✓ No ___ Int GH

*Preservatives

*Hg, Metals (pH<2 - HNO3) (Clean metals check in section)
*O&G (pH<2 - HCl, check in section) & store ≤ 6 °C
CN^- (pH>12 - NaOH) & store ≤ 6 °C
*Sulfide (pH>9 - NaOH+ZnAc) & store ≤ 6 °C
*Micro ($Na_2S_2O_3$ + EDTA) & store ≤ 10 °C
*COD, NUT, Phenols (pH<2 - H_2SO_4) & store ≤ 6 °C
*TOC (pH<2 - H_3PO_4) & store ≤ 6 °C
*BOD, TSS, TVSS, Turbidity, Surfactant, Sulfate store ≤ 6 °C
*NUT Non Acidified, Conductivity, Organics store ≤ 6 °C
*Cr (VI) (pH 9.3 - 9.7 - $(NH_4)_2SO_4$) & store ≤ 6 °C

Sample Type: C=Composite, G=Grab Matrix: L= Liquid , S = Solid CGN: Container Group Number

NOTE: ALL APPLICABLE INFORMATION MUST BE COMPLETED PRIOR TO ACCEPTANCE.

FIELD RECORD(S)

Little Falls VPDES Field Sheet

Information To Be Checked Before The Start of Each Sampling Event

1. Does the Final Effluent have any abnormal characteristics (odor, color)? Y / (N)

If the answer to the above questions is NO proceed to the next section. Please contact a supervisor if the answer is YES.

2. A. Average Plant flow for the last five days: 3.14 MGD
   B. Expected Plant flow for the next 24 hours: ~3.25 MGD

3. List the last three days of Final Effluent TSS with the most recent last: 2.0 mg/L, 2.2 mg/L, 2.0 mg/L

4. Contact Closure: (Expected Flow 3.25 MGD / 56,000 / 130) ~2 Pulses per sample.

5. Samplers for Final Effluent & FB calibrated at 500 ml per sample. (Desired volume 152 / 30)
   Final Effluent Start Time / Date: 1144 042313 Calibrated to: 500 mL
   FB Start Time / Date: 1144 042313 Calibrated to: 500 mL

The above information has been completed prior to the beginning of the sampling event. Int. HW

Sampling personnel: M. Wiggins, A. Johnson, _____

Information Check At The End Of The Sampling Event

1. Are all lids, compression assemblies and caps secure? (Y) / N 4/23 4/24

2. Final Effluent TSS for the sampling period: 1.7 mg/L (4/23), 1.2 mg/L (4/24)

3. Plant flow for the sampling period 2.946 MGD, 2.873 MGD

4. Number of samples collected in each Final Effluent & FB composite container:
   Final Effluent: 26
   FB: 26

5. Final Effluent & FB composite end time and date:
   Final Effluent End Time / Date: 1144 042413
   FB End Time / Date: 1144 042413

6. Is Temperature in collection container at the end of sampling <6° C? (Y) / N

7. Are sample volumes equal in all composite containers? (Y) / N

8. Grab times and dates:
   FB VOA: 1030 042413
   Oil & Grease: 1045 042413
   Total Phenol: 1035 042413
   FNE VOA: 1030 042413
   Free Cyanide: 1035 042413

Sampling personnel: M. Wiggins, A. Johnson

Please contact project lead with any problems incurred during the sampling event.

Record any other information that could affect sample results:

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07/08/13 - Stafford County - Little Falls - Permit Application - Resample Hg

This analytical report contains 5 pages

Hugh Jones
Laboratory Supervisor
County of Stafford
950 Kings Highway
Fredericksburg, VA 22405

hjones@co.stafford.va.us

Date Sent: 07/24/13

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: June 15, 2013
Expiration Date: June 14, 2014
Certificate # 2354

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Field Blank
Project Code: ST_LF
Sample Point: FB
Sample Date: 07/08/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Dissolved Metals							
Mercury	EPA 245.7	ng/L	<10.0	10.0	KWILLI	07/17/13	08:51

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 7/22/13

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: Stafford County - Little Falls WWTF - Permit Application
Customer Sample ID: Final Effluent
Project Code: ST_LF
Sample Point: FNE
Sample Date: 07/08/13

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Dissolved Metals							
Mercury	EPA 245.7	ng/L	<10.0	10.0	KWILLI	07/17/13	09:04

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

Authorization: Robin Parnell
Lab Manager / QA Manager

Date: 7/22/13

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CENTRAL ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REPORT
Level 1

Project: Stafford County - Little Falls WWTF - Permit Application
Project Code: Final Effluent
Sample Point: FB; FNE
Sample Date: 07/08/13

Analytical Run Information	Hg
Method	245.7
Units	ng/L
Limit of Detection (LOD)	1.1
Limit of Quantitation (LOQ)	10.0
Method Blank (MB)	<1.1
Dissolved Metals	
Sample ID: ST_LF FNE DS	
Matrix Spike Conc.	20.0
MS Percent Recovery	97%
MSD Percent Recovery	99%
MS/MSD RPD	1

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference

Validated By: _____

CHAIN OF CUSTODY

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CENTRAL ENVIRONMENTAL LABORATORY
1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455
TEL: 757-460-4214
FAX: 757-460-6586

PROJECT NAME/CODE: Little Falls VPDES 2A

ANALYSES REQUESTED, CGN & NUMBER OF CONTAINERS

Project in Lims? Yes ✓ No ____

CUSTOMER SAMPLE ID	HRSD Use Only: PROJECT CODE	HRSD Use Only: SAMPLE POINT	DATE	TIME	SAMPLED BY	Circle One: MATRIX	Circle One: SAMPLE TYPE	Hg Diss 245.7 (56)														HRSD Use Only: Presv'd Checked	HRSD Use Only: CONT. COUNT
Field Blank	ST_LF	FB	070813	1202	MB	L	C	1 ✓														✓	1
Final Effluent	ST_LF	FNE	070813	1202	MB	L	C	1 ✓														✓	1

COMMENTS:

For Ground Water Use Only
Temp. Blank 1: ____ °C
Temp. Blank 2: ____ °C

Relinquished by / Signature: Molly Boutin	Date/Time: 070913@1550
Received by / Signature: [signature]	Date/Time: 070913@1550
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time
Relinquished by / Signature	Date/Time
Received by / Signature	Date/Time

Temp. Requirement

Where required, submitted samples were transported in coolers maintained at ≤ 6 °C.

Yes ✓ No ____

Int MB

***Preservatives**

- *Hg, Metals (pH<2 - HNO3) (Clean metals check in section)
- *O&G (pH<2 - HCl, check in section) & store ≤ 6 °C
- CN^- (pH>12 - NaOH) & store ≤ 6 °C
- *Sulfide (pH>9 - NaOH+ZnAc) & store ≤ 6 °C
- *Micro ($Na_2S_2O_3$ + EDTA) & store < 10 °C
- *COD, NUT, Phenols (pH<2 - H_2SO_4) & store ≤ 6 °C
- *TOC (pH<2 - H_3PO_4) & store ≤ 6 °C
- *BOD, TSS, TVSS, Turbidity, Surfactant, Sulfate store ≤ 6 °C
- *NUT Non Acidified, Conductivity, Organics store ≤ 6 °C
- *Cr (VI) (pH 9.3 - 9.7 - $(NH_4)_2SO_4$) & store ≤ 6 °C

All sample(s) met proper *preservation requirements. Yes ✓ No ____ Int HMorp

Sample Type: C=Composite, G=Grab Matrix: L= Liquid , S = Solid CGN: Container Group Number

NOTE: ALL APPLICABLE INFORMATION MUST BE COMPLETED PRIOR TO ACCEPTANCE.

FIELD RECORD(S)

Little Falls VPDES Field Sheet

Information To Be Checked Before The Start of Each Sampling Event

1. Does the Final Effluent have any abnormal characteristics (odor, color)? Y /(N)

If the answer to the above questions is NO proceed to the next section. Please contact a supervisor if the answer is YES.

2. A. Average Plant flow for the last five days: 2.835 mgd
   B. Expected Plant flow for the next 24 hours: 2.835 mgd

3. List the last three days of Final Effluent TSS with the most recent last: 1.0 mg/L, 1.0 mg/L, 2.1 mg/L

4. Contact Closure: (Expected Flow / 10,000 / 20) 14.175 → 14 Pulses per sample.

5. Samplers for Final Effluent & FB calibrated at 600 ml per sample. (Desired volume/20) 12L
   Final Effluent Start Time / Date: 1202 / 070813 Calibrated to: 600 mL
   FB Start Time / Date: 1202/070813 Calibrated to: 600 mL

The above information has been completed prior to the beginning of the sampling event. Int. MB

Sampling personnel: M. Bertsch, _____, _____

Information Check At The End Of The Sampling Event

1. Are all lids, compression assemblies and caps secure?(Y)/ N
2. Final Effluent TSS for the sampling period: 2.0 mg/L
3. Plant flow for the sampling period 2.886 mgd
4. Number of samples collected in each Final Effluent & FB composite container:
   Final Effluent: 21
   FB: 21
5. Final Effluent & FB composite end time and date:
   Final Effluent End Time / Date: 1202 / 070913
   FB End Time / Date: 1202 / 070913
6. Is Temperature in collection container at the end of sampling <6° C? (Y) / N
7. Are sample volumes equal in all composite containers? (Y) / N
8. Grab times and dates:
   FB VOA: N/A FNE VOA: N/A
   Oil & Grease: N/A Free Cyanide: N/A
   Total Phenol: N/A

Sampling personnel: M. Bertsch, _____, _____

Please contact project lead with any problems incurred during the sampling event.

Record any other information that could affect sample results:
*mercury only

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07/31/14 - Stafford County - Little Falls - Permit Application 2A

This analytical report contains 19 pages

Hugh Jones hjones@co.stafford.va.us
Laboratory Supervisor
County of Stafford
950 Kings Highway
Fredericksburg, VA 22405

Danny Barker, TSD Environmental Scientist dbarker@hrsd.com

Date Sent: 08/26/14

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL/MAP Coordinator at (757) 460-4205.
creno@hrsd.com

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282757
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Mercury, Dissolved	EPA 245.7	ng/l	<10.0		10.0	KWILLIAMS	08/15/14	10:46
Antimony, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<20		20	KWILLIAMS	08/14/14	12:38
Arsenic, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<20		20	KWILLIAMS	08/14/14	12:38
Beryllium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:38
Cadmium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.1		0.1	KWILLIAMS	08/14/14	12:38
Chromium, Total	EPA 200.8, Rev. 5.4	ug/l	<5.0		5.0	KWILLIAMS	08/14/14	12:44
Copper, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:38
Lead, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:38
Nickel, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<2.0		2.0	KWILLIAMS	08/14/14	12:38
Selenium, Total	EPA 200.8, Rev. 5.4	ug/l	<2.0		2.0	KWILLIAMS	08/14/14	12:44
Silver, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.20		0.20	KWILLIAMS	08/14/14	12:38
Thallium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.50		0.50	KWILLIAMS	08/14/14	12:38
Zinc, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<10		10	KWILLIAMS	08/14/14	12:38
1,2,4-Trichlorobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
1,2-Diphenylhydrazine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
1,2-Diphenylhydrazine is converted to Azobenzene in the extraction process.								
2,4,6-Trichlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2,4-Dichlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
*Analyte is not included in the HRSD CEL VELAP scope of accreditation

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282757
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
2,4-Dimethylphenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2,4-Dinitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2,4-DNT	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2,6-DNT	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2-Chloronaphthalene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
2-Nitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
3,3-Dichlorobenzidine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4,6-Dinitro-o-Cresol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4-Bromophenyl phenyl ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4-Chloro-m-cresol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4-Chlorophenyl phenyl ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
4-Nitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Acenaphthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Acenaphthylene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzidine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzo(a) anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzo(a) pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
*Analyte is not included in the HRSD CEL VELAP scope of accreditation

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282757
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Benzo(b) fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzo(ghi) perylene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Benzo(k) fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Bis(2-chloroethoxy) methane	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Bis(2-chloroethyl) ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Bis(2-chloroisopropyl) ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Butylbenzylphthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Chrysene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Di(2-ethylhexyl)phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Dibenzo (ah) anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Diethyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Dimethyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Di-n-butyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Di-n-octyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Fluorene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Hexachlorobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Hexachlorobutadiene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
*Analyte is not included in the HRSD CEL VELAP scope of accreditation

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282757
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Hexachlorocyclopentadiene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Hexachloroethane	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Indeno (1,2,3-cd) pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Isophorone	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Naphthalene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Nitrobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
n-Nitrosodimethylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
n-Nitrosodi-n-Propylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
n-Nitrosodiphenylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
n-Nitrosodiphenylamine is converted to Diphenylamine in the injection port.								
o-Chlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Pentachlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Phenanthrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Phenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56
Pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/06/14	23:56

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-G-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282756
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
1,1,1-Trichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,1,2,2-Tetrachloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,1,2-Trichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,1-Dichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,1-Dichloroethylene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,2-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,2-Dichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,2-Dichloropropane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,3-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
1,3-Dichloropropene (cis+trans)	EPA 624	ug/l	<20.0		20.0	SLOPEZ	08/01/14	13:20
1,4-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
2-Chloroethyl Vinyl Ether	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Acrolein	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Acrylonitrile	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Benzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Bromodichloromethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Bromoform	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Bromomethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FB-G-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - FB
Sample ID: 282756
Sample Sub-Type: FB

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Carbon Tetrachloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chlorodibromomethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chloroform	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Chloromethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Ethylbenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Methylene Chloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Tetrachloroethene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Toluene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
trans-1,2-Dichloroethene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Trichloroethylene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20
Vinyl Chloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	13:20

Notes

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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Hardness, Total	SM 2340B 20th Ed.	mg eq CaCO3/l	135		1.16	SLABOCKI	08/08/14	08:44
Mercury, Dissolved	EPA 245.7	ng/l	<10.1		10.1	KWILLIAMS	08/15/14	10:46
Calcium, Total	EPA 200.7, Rev. 4.4	mg/l	29.7		0.300	SLABOCKI	08/08/14	08:44
Magnesium, Total	EPA 200.7, Rev. 4.4	mg/l	14.7		0.100	SLABOCKI	08/08/14	08:44
Antimony, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<20		20	KWILLIAMS	08/14/14	12:20
Arsenic, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<20		20	KWILLIAMS	08/14/14	12:20
Beryllium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:20
Cadmium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.1		0.1	KWILLIAMS	08/14/14	12:20
Chromium, Total	EPA 200.8, Rev. 5.4	ug/l	<5.0		5.0	KWILLIAMS	08/14/14	12:49
Copper, Dissolved	EPA 200.8, Rev. 5.4	ug/l	1.2		1.0	KWILLIAMS	08/14/14	12:20
Lead, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<1.0		1.0	KWILLIAMS	08/14/14	12:20
Nickel, Dissolved	EPA 200.8, Rev. 5.4	ug/l	7.1		2.0	KWILLIAMS	08/14/14	12:20
Selenium, Total	EPA 200.8, Rev. 5.4	ug/l	<2.0		2.0	KWILLIAMS	08/14/14	12:49
Silver, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.20		0.20	KWILLIAMS	08/14/14	12:20
Thallium, Dissolved	EPA 200.8, Rev. 5.4	ug/l	<0.50		0.50	KWILLIAMS	08/14/14	12:20
Zinc, Dissolved	EPA 200.8, Rev. 5.4	ug/l	41		10	KWILLIAMS	08/14/14	12:20
1,2,4-Trichlorobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
*Analyte is not included in the HRSD CEL VELAP scope of accreditation

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
1,2-Diphenylhydrazine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
1,2-Diphenylhydrazine is converted to Azobenzene in the extraction process.								
2,4,6-Trichlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,4-Dichlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,4-Dimethylphenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,4-Dinitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,4-DNT	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2,6-DNT	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2-Chloronaphthalene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
2-Nitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
3,3-Dichlorobenzidine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4,6-Dinitro-o-Cresol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4-Bromophenyl phenyl ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4-Chloro-m-cresol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4-Chlorophenyl phenyl ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
4-Nitrophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Acenaphthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Acenaphthylene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
*Analyte is not included in the HRSD CEL VELAP scope of accreditation

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzidine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(a) anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(a) pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(b) fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(ghi) perylene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Benzo(k) fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Bis(2-chloroethoxy) methane	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Bis(2-chloroethyl) ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Bis(2-chloroisopropyl) ether	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Butylbenzylphthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Chrysene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Di(2-ethylhexyl)phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Dibenzo (ah) anthracene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Diethyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Dimethyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Di-n-butyl phthalate	EPA 625	ug/l	<10.0	IA1	10.0	IGERASIMOV	08/07/14	00:27
Di-n-octyl phthalate	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27

Notes

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IA1 - The precision of the matrix spike and matrix spike duplicate was outside of acceptable limits.

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Fluoranthene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Fluorene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Hexachlorobenzene	EPA 625	ug/l	<10.0	IA1	10.0	IGERASIMOV	08/07/14	00:27
Hexachlorobutadiene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Hexachlorocyclopentadiene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Hexachloroethane	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Indeno (1,2,3-cd) pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Isophorone	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Naphthalene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Nitrobenzene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
n-Nitrosodimethylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
n-Nitrosodi-n-Propylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
n-Nitrosodiphenylamine	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
n-Nitrosodiphenylamine is converted to Diphenylamine in the injection port.								
o-Chlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Pentachlorophenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Phenanthrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Phenol	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
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IA1 - The precision of the matrix spike and matrix spike duplicate was outside of acceptable limits.

CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-C-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282759
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Pyrene	EPA 625	ug/l	<10.0		10.0	IGERASIMOV	08/07/14	00:27
Total Dissolved Solids	SM 2540C, 2011	mg/l	360		1.0	TGAY	08/01/14	15:07

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

Sample ID: LF_FNE-G-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282758
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Total Cyanide	Lachat 10-204-00-1X	ug/l	<10		10	AMOORE	08/03/14	12:22
HEM	EPA 1664B	mg/l	<5.0		5.0	JRICKS	08/03/14	08:40
Phenol, Total	Lachat 10-210-00-1-B	mg/l	<0.05		0.05	AMOORE	08/14/14	11:15
SGT-HEM	EPA 1664B	mg/l	<5.0		5.0	JRICKS	08/03/14	15:53
1,1,1-Trichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,1,2,2-Tetrachloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,1,2-Trichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,1-Dichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,1-Dichloroethylene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,2-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,2-Dichloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,2-Dichloropropane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,3-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
1,3-Dichloropropene (cis+trans)	EPA 624	ug/l	<20.0		20.0	SLOPEZ	08/01/14	15:15
1,4-Dichlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
2-Chloroethyl Vinyl Ether	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Acrolein	EPA 624	ug/l	<50.0		50.0	SLOPEZ	08/01/14	12:51
Acrylonitrile	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
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CENTRAL ENVIRONMENTAL
LABORATORY
ANALYTICAL REPORT
VA Laboratory ID 460011

HRSD

Job ID: ST_LF-31-JUL-14-164

Report Serial No.:

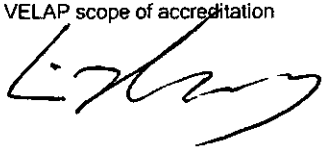
Sample ID: LF_FNE-G-073114-1
Sample Date: 7/31/2014
Customer Sample ID: Stafford Co. - Little Falls - Final Effluent
Sample ID: 282758
Sample Sub-Type: SAMP

Analyte	Method	Unit	Result	Flag	LOQ	Analyst	Analysis Date	Analysis Time
Benzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Bromodichloromethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Bromoform	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Bromomethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Carbon Tetrachloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chlorobenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chlorodibromomethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chloroethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chloroform	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Chloromethane	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Ethylbenzene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Methylene Chloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Tetrachloroethene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Toluene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
trans-1,2-Dichloroethene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Trichloroethylene	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15
Vinyl Chloride	EPA 624	ug/l	<10.0		10.0	SLOPEZ	08/01/14	15:15

Notes

LOQ is lowest concentration at which quantitation is demonstrated.
*Analyte is not included in the HRSD CEL VELAP scope of accreditation

Authorized By: Li Zhang - Lab Manager



Date Authorized: 8/21/2014

HRSD
Cleaning wastewater every day for a better Bay.

CENTRAL ENVIRONMENT LABORATORY
1432 AIR RAIL AVENUE
VIRGINIA BEACH, VA 23455
TEL: 757-460-4214
FAX: 757-460-6586

CHAIN OF CUSTODY

COC ID: 13036 COC NAME: ST_08/01/14 06:47

Sample ID	Container No	Job Name	Date	Time	Sampler Id	Matrix	Type	Samp Temp oC	Preservation	Status	CN_FIA	IARDNES	HEM	CVAF_24	CP_200_7	PMS_200
LF_FB-C-073114-1	C177452	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.4	.	R						
	C177451	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.6	.	R						
	C177439	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.5	.	R						
	C177438	ST_LF-31-JUL-14-164	07/31/2014			L	C	.	.	R				X		
	C177437	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R						X
	C177436	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R						X
LF_FB-G-073114-1	C177449	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.5	.	R						
	C177448	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.8	.	R						
	C177435	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.8	.	R						
LF_FNE-C-073114-1	C177463	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.7	.	R						
	C177462	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	1.0	.	R						
	C177461	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.6	.	R						
	C177460	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.7	.	R						
	C177459	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.6	.	R						
	C177458	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	2.0	.	R						
	C177457	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.9	.	R						
	C177456	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.4	.	R						
	C177446	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	1.2	.	R						
	C177445	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R				X		
	C177444	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R						X
	C177443	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	.	.	R		X			X	X
LF_FNE-G-073114-1	C177482	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.8	.	R						
	C177481	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.6	.	R						
	C177480	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	1.4	.	R						
	C177479	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.9	.	R						

PHNL_FIA	EMIVOL62	SGT	VOC624
	X		
	X		
	X		
			X
			X
			X
	X		
	X		
	X		
	X		
	X		
	X		
	X		
	X		
	X		
			X
			X
			X
			X

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CHAIN OF CUSTODY

COC ID: 13036 COC NAME: ST_08/01/14 06:47

Sample ID	Container No	Job Name	Date	Time	Sampler Id	Matrix	Type	Samp Temp oC	Preservation	Status	CN_FIA	IARDNES	HEM	_CVAF_24	CP_200_7	PMS_200
	C177478	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	1.1	.	R						
	C177477	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.5	.	R						
	C177476	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	1.1	.	R						
	C177475	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	1.0	.	R						
	C177474	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.8	.	R						
	C177473	ST_LF-31-JUL-14-164	07/31/2014	1030	MWIGGI	L	G	0.9	.	R						
	C177455	ST_LF-31-JUL-14-164	07/31/2014	1100	MWIGGI	L	G	1.1	.	R			X			
	C177454	ST_LF-31-JUL-14-164	07/31/2014	1100	MWIGGI	L	G	0.8	.	R			X			
	C177453	ST_LF-31-JUL-14-164	07/31/2014	1100	MWIGGI	L	G	1.0	.	R			X			
	C177442	ST_LF-31-JUL-14-164	07/31/2014	1100	MWIGGI	L	G	0.7	.	R			X			
	C177441	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	G	0.8	pH > 10	R	X					
	C177440	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	G	0.9	pH < 2	R						

Comments:

Sample ID	Container No	Comment
LF_FB-C-073114-1	C177438	sample time 1058 by MW

ACTION	BY	DATE/TIME
INITIATED:	Jennifer Reitz - Water Quality Specialist	8/1/2014 6:32:27 AM
CUSTODY:		
RECEIVED:	Greg Hill - Chemist	8/1/2014 7:33:28 AM

PHNL_FIA	EMIVOL62	SGT	VOC624
			X
			X
			X
			X
			X
			X
		X	
		X	
		X	
		X	
X			

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CHAIN OF CUSTODY

COC ID: 13039 COC NAME: ST_08/01/14 09:33

Sample ID	Container No	Job Name	Date	Time	Sampler Id	Matrix	Type	Samp Temp oC	Preservation	Status	TDS
LF_FNE-C-073114-1	C177447	ST_LF-31-JUL-14-164	07/31/2014	1050	MWIGGI	L	C	0.9		R	x

Comments:

Sample ID Container No Comment

ACTION	BY	DATE/TIME
INITIATED:	Jennifer Reitz - Water Quality Specialist	8/1/2014 9:33:03 AM
CUSTODY:		
RECEIVED:	Greg Hill - Chemist	8/1/2014 9:37:44 AM

FIELD RECORD (S)

Little Falls VPDES Field Sheet

Information To Be Checked Before The Start of Each Sampling Event

1. Does the Final Effluent have any abnormal characteristics (odor, color)? Y / (N)

If the answer to the above questions is NO proceed to the next section. Please contact a supervisor if the answer is YES.

2. A. Average Plant flow for the last ~~five~~ 4 days: ~2.6 MGD
   B. Expected Plant flow for the next 24 hours: 2.8 MGD
3. List the last three days of Final Effluent TSS with the most recent last: 0.7 mg/L, 2.0 mg/L, 0.4 mg/L
4. Contact Closure: (Expected Flow 2.8MGD / 10000 / 30) 9 Pulses per sample.
5. Samplers for Final Effluent & FB calibrated at 550 ml per sample. (Desired volume 16.5L / 30)
   Final Effluent Start Time / Date: 1050 / 073014 Calibrated to: 550 mL
   FB Start Time / Date: 1050 / 073014 Calibrated to: 550 mL

The above information has been completed prior to the beginning of the sampling event. Int. MW

Sampling personnel: M. Wiggins, J. Reitz, _____

Information Check At The End Of The Sampling Event

1. Are all lids, compression assemblies and caps secure? (Y) / N
2. Final Effluent TSS for the sampling period: 0.1 mg/L (07/30), 0.6 mg/L (07/31)
3. Plant flow for the sampling period 2.561 MGD (07/30), 3.279 MGD (07/31)
4. Number of samples collected in each Final Effluent & FB composite container:
   Final Effluent: 29
   FB: 29
5. Final Effluent & FB composite end time and date:
   Final Effluent End Time / Date: 1050 / 073114
   FB End Time / Date: 1050 / 073114
6. Is Temperature in collection container at the end of sampling <6° C? (Y) / N
7. Are sample volumes equal in all composite containers? (Y) / N
8. Grab times and dates:
   FB VOA: 1030 / 073114 FNE VOA: 1030 / 073114
   Oil & Grease: 1100 / 073114 Total ~~Free~~ Cyanide: 1050 / 073114 (MW 073114)
   Total Phenol: 1050 / 073114

Sampling personnel: M. Wiggins, J. Reitz, _____

Please contact project lead with any problems incurred during the sampling event.

Record any other information that could affect sample results: